

# THE AUK:

A QUARTERLY JOURNAL OF  
ORNITHOLOGY.

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VOL. XIV.

JULY, 1897.

NO. 3.

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## A STUDY OF THE PHILADELPHIA VIREO (*VIREO PHILADELPHICUS*).

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### *Plate II.*

THE Philadelphia Vireo was first described as a new species nearly half a century ago by Mr. John Cassin, from a specimen taken near Philadelphia, Pa., in September, 1842 (Proc. Acad. Nat. Sci. Phila., V, Feb. 1851, p. 153, pl. 10, fig. 2). It was many years later before anything was known of the breeding habits of the birds, and an article by Mr. William Brewster (Bull. Nutt. Orn. Club, V, 1880, pp. 1-7), who found the species rather commonly distributed over the Lake Umbagog region in western Maine, remains to-day the only sketch we have of them. I should perhaps except the notes of Mr. E. Seton Thompson who, in 1884, found a nest and eggs near Fort Pelly, Assiniboia, and briefly recorded the circumstance (Seton [= Thompson], Auk, II, 1885, pp. 305, 306). Few other observers have been favored with more than rare glimpses of the birds, which are still considered prizes wherever they are captured. And yet many specimens, almost wholly migrants, have been recorded of late years, so that the geographical distribution of the species is pretty definitely established. It appears to winter in Central America, as far south as

Costa Rica, and during the migration ranges over the eastern United States, being most abundant in the Mississippi Valley. Its breeding range probably covers a large part of Canada east of the Rocky Mountains and a few adjacent portions of the northernmost United States. Breeding specimens have been recorded from New Brunswick (Edmundston), Quebec (near Ottawa), Ontario (Moose Factory), Manitoba (Winnipeg), and Assiniboia (Fort Pelly), the last the westernmost record; also from Maine (Lake Umbagog), New Hampshire (White Mountains), Indiana (Carroll County), Illinois (Chicago), Minnesota and Dakota (Red River Valley), and Nebraska (Lincoln), the last the westernmost record in the United States. There is at present no good evidence of the occurrence of the species, except as a migrant, in Michigan, Wisconsin, and Iowa, where it is to be expected, for it has been recorded as breeding in the adjacent States. Numerous other records need hardly occupy space here for they have received ample treatment elsewhere and have served me only as a basis on which to build the brief summary of facts here presented.

Mr. Brewster was the first to acquaint us with the social side of the Philadelphia Vireo, and it is largely from this point of view that I now wish to consider these modest little birds, dragging them again before the public after they have conducted their domestic affairs quite undisturbed for the last sixteen years. I feel on terms of considerable intimacy with them for I have cultivated their acquaintance during portions of four summers spent among them near the little village of Tadousac, Province of Quebec, Canada, where I have found them to be rather common. My experience with them has been very much like Mr. Brewster's and consequently my remarks must of necessity be somewhat in the nature of a postscript to his graphically penned observations.

It was on the 10th of July, 1893, that a Philadelphia Vireo introduced herself to notice by scolding me most unceremoniously, — at least I took it to be a female and one just off the nest, from the way she kept ruffling and picking at her feathers and shaking herself as many birds do when disturbed from their eggs. Still, no nest could be found, nor was my lady anywhere about at later visits to the same spot. However, profiting by the fact that I had

seen an undoubted Philadelphia Vireo, and stimulated by the recollection of what Mr. Brewster had written about the great similarity between the song of this bird and that of the Red-eyed Vireo, I shortly made the discovery that, like him, I had been living right in the midst of Philadelphias, mistaking them for Red-eyes. No better illustration of the danger of identifying birds by their songs alone could be desired than our similar experiences, and it teaches an obvious lesson. I soon familiarized myself with the new song and, guided largely by it, have found this rare and wilderness-loving Vireo to be irregularly distributed as a summer resident in small numbers over a large area of wild mountainous country about Tadousac.

The village is most picturesquely situated at the junction of the Saguenay with the St. Lawrence River, being hemmed in by low mountains of inconsiderable height, a thousand or fifteen hundred feet, part of the great Laurentian chain which extends for many miles along the north shore of the broad St. Lawrence. Precipices of no mean height, gray with lichens and mosses, frown darkly over the Saguenay, while the adjacent hills and mountains, piled in great confusion, stand out as dull masses of bare granite or are scantily clad with struggling bushes and dwarfed trees that cling in the seams and crevices. In some of the valleys there are small rushing brooks tumbling over the rocks shadowed by a dense growth; in others, filled with the soil brought thither by the erosion of a former epoch, the brooks have sunk deep channels or gulches, which also are oftentimes well wooded. There are, too, terraces of sand, underlaid with clay banks, and eastward from the village they jut boldly, in great bluffs, into the St. Lawrence. In the rocky portions of the country no cultivation is possible, but the terraces and the valleys afford here and there a few fields where slim crops of hay and oats are raised. The wilderness extends eastward, westward, and northward, a sparsely wooded country of towering hills and rocks where there is little to break the monotony save a great number of small lakes, clear and cold, stretches of 'barrens,' and the single road which winds through the valleys.

The forest, even where worthy the name, is thinly scattered over this inhospitable region and much of it has fallen before axe

and fire, giving place, especially in the vicinity of Tadousac, to a second growth in which the bush element predominates and where deciduous trees considerably outnumber the conifers. Poplars or aspens, white and yellow birches and maples are the commonest trees, the poplars and white birches occurring in small straggling groups or scattered broadcast throughout the woods and clearings. There is, too, a goodly sprinkling of evergreens of several sorts — pines, spruces and firs — which grow in squat little patches or quite alone in the woods or on the mountain sides. The northern character of the region is indicated by the abundance of such species (among many others) as the northern scrub pine (*Pinus banksiani*), the Labrador tea (*Ledum latifolium*), the crowberry (*Empetrum nigrum*), the bunchberry (*Cornus canadensis*), and scores of other shrubs and wild flowers. Immense quantities of blueberry and raspberry bushes thrive in the drier places, while the little swamps are masses of vegetation, but the most striking and most abundant of all the bushes is the alder. Alders, large and small, from flat spreading little mats to shady groves of trunks a dozen and more feet in height, are visible at every turn. Flourishing on the sandbanks, dotted on the mountain sides, rooted in cool glens or fringing the swampy margins of the lakes, they tangle up with the general undergrowth or form separate patches all by themselves. When the latter are of any extent they become broad canopies of shade beneath which is found an open space where the breezes and the birds freely circulate.

The summer climate is delightful at Tadousac, its situation, a trifle north of Lat. 48°, and the great body of cold tide-water in its immediate vicinity contributing to keep the summers cool. From the foregoing remarks, I trust that some idea may be gained of the country where I have found the Philadelphia Vireo, — a country resembling in many respects, I fancy, that part of northwestern Maine where Mr. Brewster became acquainted with the species many years ago.

#### HABITS AND CHARACTERISTICS.

My observations at Tadousac have never extended over more than six consecutive weeks in any one season, but my visits have



been so timed that I have really studied the birds from the middle of June to the first of September. The male Vireos are in full voice during June, but toward the end of the month the song period rapidly wanes, and after the first days of July their notes are not very often heard save as a subdued warble at rare intervals. Now the birds ramble about in the bushes almost exclusively, instead of resorting, as has been their wont, to favorite perches high in the trees. Early in July, in the second week, the young begin to leave the nests (which, I regret to say, I have not been fortunate enough to find) and betray their presence like all inconsiderate fledglings by importunate demands for food; and no sooner are they able to shift a little for themselves than the parents have still further trouble thrust upon them in the shape of the autumn moult. This begins as early as the 20th of July and seems to be pretty well completed during the second week of August. By this time the young have also acquired their fall plumage, which is not appreciably different from that of the adult. Young and old are now found associating with small restless bands of would-be migrants, perhaps a couple of Magnolia or Black-throated Green Warblers, a Red-eyed Vireo, a stray Redstart, in fact almost any of the summer sojourners, not forgetting a Chickadee or two ever ready with their irrepressible remarks. After the middle of August, the Philadelphia Vireos seem to disappear for good — at least I have not found them later than this — and the summer cycle of their life is completed.

The birds are far less abundant than the Red-eyed Vireos over the same area, which outnumber them perhaps ten to one, and frequently the whole day passes without my seeing or hearing a single bird. Each summer I am able to locate upwards of a dozen pairs, but unless the males are singing they may give no token of their presence. The device of squeaking on the back of the hand sometimes has charms for them while at others, particularly when they are moulting, it has no effect whatever. Usually the device does not fail to stir up the nearest White-throated Sparrows, who storm with untiring vigor until all the other birds in the vicinity have come to see what the row is about. The Olive-backed Thrushes, the Magnolia Warblers, the Canadian Warblers, the Redstarts, the Red-eyed Vireos, yes, all the birds

within earshot, rush to the scene, take a hand in the chorus and having expressed their opinions discreetly retire. Very often a Philadelphia Vireo, seldom two, will join in the rumpus for a little while but they soon slip away satisfied, leaving the White-throats as boisterous as ever in their denunciations.

It is impossible not to be struck with the close resemblance between the Philadelphias and the Red-eyes in appearance, actions, and habits, as well as in song. Both frequent the same localities in the wilderness, but the Philadelphias rather shun civilization and rarely appear, like the Red-eyes, in the village trees. Both prefer to sing in the upper branches, but I have seldom found the Philadelphias in the rambling groves of birches which are the especial delight of the Red-eyes, and they are more partial to the low, bushy, second growth or copses of alders sprinkled with stray trees. Both hop from bough to bough in search of food, singing as they go, and in actions the one is almost the counterpart of the other, save that the smaller bodied Philadelphias are quicker in their movements as contrasted with the lazy leisure of the Red-eyes. Another point of difference is in the amount of curiosity displayed, the Philadelphias exhibiting comparatively little while the Red-eyes, fairly brimming over with it, never fail to seek the reason for unusual sights or sounds. The Philadelphia's song is much slower than that of the Red-eye, while his scolding notes are much more rapid and less evenly delivered.

There would seem to be a streak of ill-temper in the mental composition of this little Vireo, which manifests itself in brief outbreaks of scolding. These notes are even interjected into the song, and also greet you unexpectedly in the woods, as if you had disturbed nest or young, but many of these rude birds turn out to be males and can never be found a second time in the same locality. The fact is, unless they are in full song, it is no easy matter to find them in the same neighborhood two days in succession, for the bushes are very thick and afford safe cover. In fine weather their pleasing music may be heard from daybreak till midday, and again in the afternoon, but when it is dull and rainy or hot they often remain perfectly silent. While the female is incubating, her mate will spend hours in song, choosing an elevated perch or roving about, high and low, singing as he goes. Later in the

season he keeps altogether in the bushes, warbling now and then, as if under his breath, in soft and disjointed measures. Sometimes a pair is to be seen rambling together through the low bushes, uttering peculiar soft little clicks and squeaks the while, but I must confess I find them at all times adepts in the art of concealment, although they are never really timid.

There was one bird that I used to watch by the hour. He was usually to be found singing on a particular twig near the top of a tall poplar, one of a small group that he claimed as his exclusive domain. When I first saw him, flakes of poplar-down were filling the air and lay drifted like banks of snow in every nook and corner, for it was then the middle of June and early summer was in full swing. The daily round of life of my little friend *philadelphicus* seemed to closely correspond with that of others that could not be so regularly studied, and his traits differed in small degree from those of his brethren. He would sing the whole of the morning, scarcely skipping a note for upwards of half an hour at a time. During the song he contrived to keep his body in continual, restless motion as if on the point of taking flight, but in reality he did not even shift his hold on the bough. After a time, impelled no doubt by hunger, he would roam about in the adjacent trees, hopping with deliberation from limb to limb and turning his head from side to side in search of food. Occasionally grasping the very end of a branch he would sway upside down while investigating its insect possibilities, or swiftly pursue and catch in the air some heedless fly. His now interrupted snatches of song were infrequent and his scolding, mewing notes would be heard from time to time. At length descending to the adjacent bushes, he would be joined by his mate, doubtless from her nest, and with soft lisping murmurs they would soon be lost in the tangle. Later on, I would hear him again from the old stand, or before returning thither his melody might be heard in some of the small trees that dotted the expanse of bushes. And so the days would slip uneventfully by with alternate periods of song and quiet.

I feel confident the nests are not placed in the trees, for in the localities where I have found the Vireos an examination of their very tops is accomplished without much difficulty. Besides, the only nest ever taken, that found by Mr. Thompson, was suspended

only ten feet from the ground in the twigs of a willow. It contained four eggs on the 13th of June, which resembled the eggs of the Red-eye but unfortunately were accidentally destroyed. I used sometimes to meet with incubating females that made very little fuss, perhaps merely leaning forward from a branch near at hand, the crown feathers raised in silent inquiry. But usually they gave vent to their disapproval of my presence in bursts of vigorous mewling notes in which the male heartily assisted. He does not, however, assist in incubation, like his relation the Warbling Vireo, but devotes himself to melody, and a very cheerful melody it is too.

#### SONG.

To my ear the song partakes of the liquid sweetness and leisurely irregularity of that of the Solitary Vireo, the notes being sweeter, clearer, and a trifle higher pitched than those of the Red-eye. It is no easy matter to describe the song of a bird intelligently. We do not know their language nor have we alphabetical signs or musical notation, that can convey to us more than a faint idea of bird music. Fortunately we have comparisons to fall back upon, and as the song of the Red-eyed Vireo is well known to many of us, some idea of that of the Philadelphia Vireo may be gained when I say that while the former rapidly ripples out his music, the latter reiterates slowly a series of double or triple notes with marked pauses between. My experience has been that having once heard *philadelphicus* you will seldom mistake it for *olivaceus*, while the reverse will not hold. There is more reduplication of notes in the song of the Red-eye and one might say, less time for taking breath. In Mr. Brewster's account of the birds, which I can corroborate in every particular, he speaks of a "double-syllabled utterance" coming in irregularly with the general song. I would merely emphasize the fact that it is the essence of the song and enters into it at as regular intervals as any of the other notes. It is a liquid note, beginning the song and occupying about three fifths of a second for the two syllables of which it is composed, on both of which considerable emphasis is laid. There seems to be a slight trill or ripple between the

syllables when heard close at hand and the inflection rises slightly on the latter. A pause follows, approximating one and two fifths seconds, and the first note is again repeated, less forcibly and slightly varied. Again the pause ensues, and now it is followed by a triple note, not interrogatory and indistinguishable from one of *V. olivaceus*. Again the pause, this time followed by a repetition of the triple note, slightly varied so as to lose some of its sibilance, and after the customary pause of one and two fifths seconds, the song is repeated from the beginning, nearly eight seconds having elapsed in completing one cycle. The four notes may be suggested by the syllables *chŭr-r'wē*, *chŭr-wē*, *psŭ-ŭ-rē*, *psŭ-r-rē*. The sequence of the notes, however, may vary a little, owing to the occasional substitution of one for the other, but the same one is not repeated more than twice in succession, even after a break in the continuity of the song. Heard at a distance, it practically reduces to two alternated notes, which I find represented in my note books of different years as *chŭr-wē*, *tŭr-ŭ-dē* in one place and *psŭ-wŭ'rt*, *psŭ-wŭ-tŭt* in another. The discrepancies are instructive, showing independent efforts on my part to lay hold of the same sound.

The speed at which the song flows on is an interesting factor and is remarkably uniform for each individual songster, — in fact, I could almost identify certain Philadelphias and Red-eyes by timing their songs. *V. philadelphicus* sings at the rate of from twenty-two to thirty-six notes a minute, averaging a trifle over twenty-six, while *V. olivaceus* rattles on at the rate of from fifty to seventy, their song rate averaging a trifle over fifty-nine. I do not mean to assert that there were always just so many notes in a given minute, for both species pause irregularly and drop out notes now and then, but if all were uttered in the same cadence as those actually heard, these figures would be equaled, and, in fact, very often are equaled. They are, however, only to be satisfactorily obtained at the height of the song period, and but for the careful use of a stop-watch I would hardly feel justified in presenting them. Some individuals are better songsters than others, but all follow more or less closely the type I have endeavored to describe. The song is sometimes a softer and disjointed affair and this soliloquizing type is characteristic of the wane of the song period.



Besides the song, this Vireo has the scolding note already mentioned. It does not resemble the corresponding complaint note of *olivaceus*, but is almost exactly like the aggressive nasal *mÿă* of *gilvus*, which has a suggestion of the katydid about it. It is usually rapidly repeated five or six times or intermitted and continued irregularly by series of from three to eight or more. Males and females both make use of it, raising the feathers of the crown into a crest at the same time so as to look quite angry. This is the first sound imitated by the young birds, though usually rendered by them one note at a time and in a rather 'scrapey' voice, while the approach of the food-laden parent will excite a chatter, marked chiefly by its incoherent rapidity.

The other regular notes of the adults are the indescribable soft clickings and squeakings of which I have already spoken, a mine of low music intended as household gossip when the loud song is laid aside. These, as well as the scolding notes, are also interspersed in the intervals of the soliloquized song in which the male indulges when roving at will.

It is evident that but one brood is raised in a season. I have seen young birds as early as July 7, comical little chaps largely bare skin and the promise of a tail. At this tender age they are unwilling to essay flight except when urged by anxious parents to make a clumsy, flying leap from one twig to another, but they are knowing enough to keep quiet when they hear a crashing in the bushes, and as they become older they lose no time in moving quickly away. I have found them in alder thickets or along some of the bushy cattle paths which end abruptly at steep walls of rock or lose themselves in small clearings. In fact I never could tell when or where I might run across the birds, young or old, but during the latter part of July, when the moult is in progress, it is almost impossible to find them anywhere. I associate them, however, with the alder patches where they wander loudly stinging in early summer, softly warbling in midsummer, and becoming silent long before the chill of autumn has come. It could be said that the Philadelphia Vireo might well emulate his indefatigable relation, the Red-eye, whose song period extends day in and day out well into the fall, but our little friend undoubtedly knows well what he is about or he would not have successfully



hidden himself from the world for so many years. He is to be expected and should be looked for as a regular summer resident in many of the wilder regions of Canada.

#### PLUMAGE AND MOULT.

There yet remains something to be said regarding the plumage and moult of the birds. On the accompanying plate is figured an adult male *Vireo philadelphicus* in breeding dress, contrasted with *Vireo gilvus*, the species it most resembles in plumage. It may be seen at a glance how much yellower *philadelphicus* is, a difference that holds in all plumages and at all seasons of the year. A more distinctive character, however, than color is found in the short first primary of *gilvus*, which is abortive and practically absent in *philadelphicus*, the former, therefore, having by actual count ten primaries, the latter apparently only nine. *V. philadelphicus* in the spring is distinctly washed below with pale lemon yellow, which is deeper in the fall dress. When seen in the trees the birds may easily be mistaken for the small females of *Vireo olivaceus*, and they also bear a certain resemblance to *Vireo belli*, which western observers would do well to remember.

My series of twenty-six specimens is an instructive one, containing as it does spring, summer and autumn birds, old as well as young. From among the latter I select the following as typical of the first or nestling plumage here described for the first time.

*Young in first plumage* (♂ juv., No. 3670. Collection of J. Dwight, Jr., Tadousac, Quebec, July 13, 1893):—Above, olive-brown, paler on the head, nape and rump. Below, pale primrose-yellow deeper on the flanks. Side of head, including the auriculars and superciliary stripe, buff-yellow; orbital ring faintly yellow; trace of dusky loreal and post-ocular streak. Remiges (including coverts) and rectrices clove-brown narrowly edged externally with olive-green, brightest on the secondaries, becoming olive-gray at the apices of the primaries and secondaries and strongly tinged with brown on all the wing-coverts. Iris, deep hazel brown. Feet, pinkish buff, drying to a dusky wood-brown. Bill, pale bistre, the lower mandible flesh tinged, drying to a yellowish raw umber-brown.

The specimen is very young, the wing quills and their coverts only about one half grown, and the tail is barely sprouting. The yellow below serves to at once distinguish it from either *gilvus* or

*olivaceus*, both of which are silky white below at the same age. Other specimens in my series show the change of the young into autumn plumage, which is acquired, as in *Vireo olivaceus*, without moult of flight-feathers or tail. These remain, although the body-feathers begin to be replaced by new ones before the wings and tail have attained their full growth. The feathers retained are the primaries, their coverts, the secondaries, the tertiaries, and the rectrices, — all the rest of the plumage is evanescent and is renewed soon after the bird leaves the nest. A bird taken July 28 has the wings and tail fully grown but the deciduous sheaths are still in place at the bases of the quills. The brown upper parts are mottled with the bright olive-green autumn feathers which have extensively replaced the others on the nape, back and rump. The forehead and sides of head show many new feathers. A yellow band below in strong contrast to the paler first plumage, has developed on the throat and shows faintly on the flanks beyond the forking of the inferior feather tract. The new wing-coverts (except the primary coverts) are beginning to sprout. A bird taken August 4 is farther advanced. The sheaths of the quill feathers have disappeared; the wing-coverts are nearly full grown; and the new body plumage is nearly complete, only a few feathers still in their sheaths sprouting here and there. A bird of August 6 is almost entirely in fall dress, and others of August 15 are still moulting a few auricular and abdominal feathers, while one of September 24 shows no trace whatever of the moult and is practically indistinguishable from the adult. Still, in average specimens the yellow below is a little richer and extends further over the abdomen and the bill is yellowish instead of blackish as in the adult.

Whether there is any spring moult in this species I am unable to say for I have seen no specimens taken at a time when it might be expected to occur, but the state of the plumage in spring birds indicates that there is none. The fall plumage of young and old is probably worn until the next annual moult, which begins towards the end of July. In spring specimens the amount of yellow is variable, although paler than in the fall, and the abrasion is not at all marked, but this is to be expected in an arboreal species. A specimen of July 22 is the earliest one that shows signs of moult.

There are a few pin-point new feathers on the breast, the crown and the back; the ninth and eighth primaries have been replaced by new quills one quarter grown, the ninth slightly longer than the eighth, and the seventh barely shows as a minute follicle. Specimens taken later show the progress of the moult which is complete, body-feathers, wings and tail. There is considerable individual variation in the sequence of development of the feathers of the different tracts, but the development is pretty uniform on the whole and seems to radiate from various centres. The earliest new feathers appear on the breast, near the forking of the inferior feather-tract, and on the back in the interscapular region. The crown shortly begins to moult and the inner primary (the ninth by count) falls quickly followed by the eighth. The body plumage is quite rapidly renewed, the corresponding primaries of each wing slowly falling in pairs with their coverts so that the body plumage is largely renewed before the outer primaries fall. The wing-coverts begin to be renewed after the primaries begin to fall and are usually complete before the outer primaries are replaced. The outer members of the rows are the first to be moulted and this also applies to the tertiaries which are completely renewed before the secondaries begin to fall. This occurs when only three or four of the old outer primaries remain, and the rectrices also fall at this stage, or a little before, beginning with the middle pair. The outer secondary of each wing falls first while the inner secondary and the alula are the last parts of the wing to be renewed. The renewal of the body plumage is usually very well under way before the moult is conspicuous in the wings, but the last traces of new growth are usually a few auricular and abdominal feathers and perhaps a few on the chin and scapular region. A bird of August 4 is particularly instructive. All that remains of the old dress are a few auricular, scapular and abdominal feathers of the body plumage, the outer pair of rectrices of the tail, the three outer primaries, their coverts, the alula, the five inner secondaries, and much of the lining of the wing.

I have followed the moult with considerable detail because nothing has been known regarding it in this particular species, and it seems probable from the material I have handled that it is typical of all of our Vireos.

I have taken this opportunity of describing the unknown first plumage and I have exploited the birds themselves in a manner which I trust has been of interest to my readers. The Philadelphia Vireos themselves, however, may think I have trespassed too much on my acquaintance with them.

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### THE TURKEY QUESTION.

BY DR. ELLIOTT COUES.

I WOULD not bring up this vexatious matter if we could flatter ourselves that we had settled it acceptably in the A. O. U. Check-List. That we have not done so is evident; for the British Museum Catalogue of 1893 reverses our decision, in so far as nomenclature is concerned; and we are not likely to be supported in that position by any writers except those who copy us blindly. In my judgment, we are exactly wrong; and I hope to see the wrong righted in the next edition of the List.

My contention is, that the name *Meleagris gallopavo*, as now restricted, belongs to the Mexican Turkey, and that some other name must be found to distinguish the Wild Turkey of the United States. There is no material fact of ornithology in dispute; the issue is simply the proper application of our rules in this instance; it is independent of any question whether the two birds be regarded as full species, or as subspecies; it is independent also of any question of the availability of Bartram's name *americana*. The point is, to which form of *Meleagris* does the Linnæan term *gallopavo* properly attach?

On various former occasions when I was treating of these birds—as in all the editions of the 'Key,' in the 'Birds of the Northwest,' in the 'Century Dictionary,' and in other publications, I have taken the ground that *M. gallopavo* designated the form called *M. mexicana* in 1856 by Gould, on the theory that the Linnæan name was based primarily upon the domestic Turkey,

which is incontestibly descended from the Mexican bird, mainly if not entirely. This is the view taken by most writers, as by Baird in 1858, 1866, and 1874, and endorsed by such high authority as Newton in the following terms (Zool. Rec. V, 1868, p. 102): "It seems to us that the name *gallopavo* must be retained for the tame race, and consequently for the species whence it has sprung, having been applied by Linnæus to the form domesticated in Sweden."

This is quite true; but I am willing to recede from the extreme of my position to the length of conceding that there may have been and doubtless were European importations of the United States bird as well as of the Mexican, and that thus both forms may have been actually concerned in the production of the domestic races. This does not alter the nomenclatural aspects of the case one iota; it simply makes the Linnæan *M. gallopavo* a composite, to be dealt with by our ordinary rule for such cases; which is, that the original name of a composite shall be retained for what is left of the compound after a new available name has been bestowed upon any one of its components. I do not doubt that *M. gallopavo* of Linnæus 1758 or 1766, covered all the Turkeys that author ever saw or heard of; and in that case, what was the first tenable name given to distinguish two or more forms, and to which form was such name applied?

Clearly, the United States bird was distinguished *from* the Linnæan *gallopavo* by several names, of different authors, long before Gould named the Linnæan residuum *mexicana*.

1. The first of these is *Le Dindon sauvage*, *Gallo-pavo sylvestris*, BRISS., Orn. I, 1760, p. 162, based exclusively on the New England Wild Turkey, *Gallopavo sylvestris Novæ Angliæ* of RAY, Syn. 1713, p. 51, No. 3. But Brisson was not a binomialist, and his name is unavailable, though it had been already used by Catesby, and was afterward brought up by Le Conte.

2. Probably the next names for the United States bird are *M. americana* and *M. occidentalis* of BARTRAM, Trav. 1791, p. 290 and p. 83. But Bartram, they say, was no binomialist, and I pass him by in this connection; though my most ardent opponent in Bartram's case, my friend Dr. Allen, has used *occidentalis* for the New England bird (Bull. Nutt. Orn. Club, I, 1876, p. 55), not-



withstanding the fact that, as based on the Florida bird, it probably indicates the form now known as *M. g. osceola*.

3. *M. palawa* BARTON, Med. and Phys. Journ. II, 1806, p. 163, is another name for the United States bird, which may be passed by as resting on no description.

4. We next come to *M. sylvestris* VIEILL., Nouv. Dict. d' Hist. Nat. IX, 1817, p. 447, and *M. pera*, VIEILL., Gal. Ois. II, 1825, p. 10, pl. 201, both belonging to the United States bird, and one of them being tenable for it, if none of the foregoing be available.

It is thus seen that all the distinctive names of Turkeys belong to the United States bird, down to the time when Gould distinguished the other one; and that his name is a pure synonym for the Linnæan *gallopavo* after elimination therefrom of our common Wild Turkey. How then can the latter be considered the true *gallopavo*, and *mexicana* be tenable?

Inspection of the Linnæan basis of *gallopavo* will show its thoroughly composite character. The diagnosis, habitat, etc., cover both forms. The first citation is of the Fn. Svec. 1746, p. 198, which is of course the domestic bird. The second is Ray, as above noted, which is the New England bird. The third is Albin, 1740, pl. 35, which is the domestic bird. Then under  $\beta$  comes the *gallopavo* of Gesner, Aldrovandus, Belon, Jonston, Willughby, Ray again, and Brisson's pl. 16—such references to the fathers and patriarchs including of course all Turkeys, though mainly bearing upon the domestic race. Finally, the Linnæan  $\gamma$  is the "*gallopavo cristatus*," being the crested variety of the domestic bird, as figured by Albin, 1738, pl. 33.

If I be wrong in this contention, it should be easy to refute me, as I advance no new facts—there are probably none to be found, so well is the whole case already known; and unless I have forgotten or overlooked some material point which will reverse my decision, we must use *M. gallopavo* for the Mexican bird, and find some other—I care not whether *americana*, *palawa*, *sylvestris*, or *fera*—for the common wild Turkey of the United States.

The error in this case is probably traceable to Baird, 1858, when *mexicana* was adopted; whence it went into the 'Hist. N. A. Birds' in 1874, as a matter of course, and thence by an easy transition was imported into our 'Check-List'; though I had meanwhile set the matter right in the 'Key' and elsewhere.



There is probably another change required in our nomenclature of this genus; certainly so if, as some think, *M. g. ellioti* of SENNETT, 1892, is synonymous with his *M. g. intermedia* of 1879.

*Agriocharis ocellata* is a term which has been applied to the Honduras Turkey, which differs superspecifically from *M. gallopavo* in the lack of pectoral bristles, peculiar carunculation of the head, long sharp spurs of the male, and ocellation of some portions of the plumage, as set forth by CHAPMAN, Bull. Am. Mus. Nat. Hist. viii, 1896, p. 288.

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### SOME ABNORMAL COLOR MARKINGS.

BY GERRIT S. MILLER, JR.

MANY instances of albinism, melanism, and other abnormal color conditions in birds have been recorded,<sup>1</sup> but these records are for the most part concerned with cases in which large, conspicuous, and indefinite areas of the plumage are affected. While such abnormalities are interesting they are greatly outweighed in importance by others, usually of a less noticeable character, in which the unusual markings are so arranged as to resemble normal color patterns. Suggestions of characters of related species are often to be found in these symmetrical markings, some of which might be regarded as the result of hybridism did not the well known hypothesis of atavism offer a more satisfactory explanation of their occurrence. I wish to call attention to a few of the more conspicuous among the many cases of this kind that have come to my notice.

#### *Colaptes auratus* (Linn.).

An adult Flicker (No. 5619, Miller collection, purchased many years ago in the New York markets by J. G. Bell), normal in

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<sup>1</sup> See, for instance, Deane, Bull. Nutt. Orn. Club, I, pp. 20-24, IV, pp. 27-30; Brewster, Auk, XII, pp. 99-100; Toppan, Bull. Ridgway Orn. Club, No. 2, pp. 61-77.

every other way, has all the white feathers of the rump marked subterminally with round or subcordate spots of black. The larger feathers of the rump are in addition crossed or nearly crossed by from one to three black bars, each of which tends to narrow near the shaft so that occasionally the constriction divides the bar into two distinct spots.

In the Cuban *Colaptes chrysocaulosus* the color is similar to that of *C. auratus* except that it is everywhere strongly suffused with tawny, the black markings are more extended, and the feathers of the white rump patch are closely and irregularly barred with black. Each rump feather in this species has a subterminal broadly cordate black spot extending nearly across both webs. Usually a broad black bar and sometimes a second (the latter always indistinct) crosses the feather below the terminal spot. The proximal bars tend to narrow near the shafts of the feathers, but they seldom if ever break up into pairs of spots as in the abnormal *C. auratus*.

The peculiarities of its rump markings make No. 5619 an almost perfect intermediate between *Colaptes auratus* and *C. chrysocaulosus*. Did the breeding ranges of these two species overlap this specimen would probably be considered by many a hybrid, since so-called hybrids often blend the characters of their supposed parents no more perfectly than this Flicker does the peculiarities of the Continental bird and its Cuban representative.

#### *Nucifraga columbiana* (Wils.).

One Clarke's Nutcracker in the series of thirty-three skins in the U. S. National Museum (No. 99858, Mt. Lassen, Calif., June 23, 1884) has most of the greater and lesser wing-coverts spotted with white. The spots, though small, form wing bars nearly as distinct as those normally present in the European *Nucifraga caryocatactes*. The wing-coverts in adult *N. columbiana* are normally plain, but the extreme tips in immature birds are usually very pale gray, thus forming a distinct contrast with the rest of the feather.

#### *Pipilo erythrophthalmus* (Vieill.).

A Towhee from North Truro, Mass. (♂ ad., No. 4208, Miller collection, August 12, 1889) is normal in all respects except that

the scapulars on each side are conspicuously edged with white. The marking is only slightly less extensive than in a specimen of *Pipilo maculatus oregonus* taken at Victoria, B. C., on August 1, 1888. Eastern Towhees with spotted scapulars have been recorded before but such specimens are always of interest.

### *Junco hyemalis* (Linn.).

An eastern Junco (♂ ad., No. 4956, Miller collection, North Truro, Mass., April 12, 1890) has the wing-coverts tipped with white so that two distinct bars are formed in each wing when the feathers are properly arranged. These bars are narrower than in most specimens of the western *Junco aikenii*, but I have seen individuals of the latter in which they are less well developed than in the North Truro bird. Juncos with white wing bars have been found in the Eastern States before but they are of very rare occurrence.

### *Piranga erythromelas* Vieill.

Three adult male Scarlet Tanagers in the collection of Dr. A. K. Fisher have conspicuous wing markings strongly suggestive of those normally present in the western *Piranga ludoviciana*. In two of these birds (No. 4017, Washington, D. C., May 18, 1890, and another taken at Sing Sing, N. Y., on May 22, 1880) the greater coverts are almost wholly bright scarlet. In the other (No. 919, Sing Sing, N. Y., May 16, 1881) the greater coverts are gamboge yellow narrowly edged with black. The yellow is brighter than that occupying the same position in *P. ludoviciana* but the bar formed by it is not so broad as that of the western bird.

### *Ampelis cedrorum* (Vieill.).

An adult Cedar Bird (No. 5481, Miller collection, Providence, R. I., February 18, 1886, J. M. Southwick), otherwise normal, has the flight feathers in each wing spotted subterminally with dull grayish white. These markings are as nearly alike on corresponding feathers of the opposite wings as is ever the

case with a normal bilaterally symmetrical color pattern. On the distal primary the spot is very indistinct and nearly confined to the inner web where it occupies a space 3 mm. long (measured at the shaft) and 4 mm. from the tip of the feather. Toward the inner margin of the web the spot narrows rapidly and disappears without reaching the edge of the feather. On the outer web there is the faintest possible suggestion of a grayish trace close to the shaft and opposite the spot on the inner web. On the second and third primaries the spots become more distinct and extend nearly to the margin of the inner web. On the third primary the spot is 5 mm. long and 5 mm. from the tip of the feather. On the fourth primary in each wing the spot appears distinctly on the outer web, and from here on the portion of the spot on the outer web becomes larger and more conspicuous, that on the inner web at the same time diminishing until on the proximal true flight feather there is no mark at all on the inner web. The penultimate feather shows a trace of white on the inner web in the right wing, but none in the left, and the last spot is slightly larger in the right wing than in the left, otherwise the markings are exactly alike on the opposite wings.

While these markings have all the characteristics of a normal color pattern there is no known relative of the Cedar Bird with wings spotted in an analogous manner.

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## THE TERNS OF PENIKESE ISLAND, MASSACHUSETTS.

BY GEORGE H. MACKAY.

"In the lap of sheltering seas  
Rests the isle of Penikese."

*The Prayer of Agassiz,*

JOHN G. WHITTIER.

IF THE reader will glance at the southern portion of a map of New England, it will be seen that there is a string of sixteen

islands extending from southern Massachusetts towards the westward, which are called the Elizabeth Islands. These islands divide the waters between the mainland and the island of Marthas Vineyard. That portion of the ocean at the southward is known as Vineyard Sound, and that to the northward as Buzzards Bay, so named by the early settlers of Dartmouth on the adjoining mainland, it is supposed, from the abundance of the Fish Hawks (*Pandion haliaëtus carolinensis*) formerly found there, these birds being called Buzzardet or little Buzzard in the earlier works on natural history.

It was on the westernmost island of this group that their discoverer, Bartholomew Gosnold, landed in 1602, and built a fort and storehouse, on a small islet in a pond at the western end of the island, which he named Elizabeth, in honor of the English queen of that name. This island, of about five hundred and sixteen acres, is known to the present generation as Cuttyhunk, and by the Indians as *Poocutohhunkunnop*.<sup>1</sup> It was formerly wooded with trees of various kinds. Situated at the entrances of Buzzards Bay and Vineyard Sound, with an altitude of one hundred feet above the sea, it affords one of the finest marine views to be obtained on the coast.

A little less than a mile away, in a north-northeast direction, is another small island of about seventy-five acres of upland, with an elevation of eighty feet, and formerly covered with cedars, none of which now remain. This island was named Hills Hap, by Gosnold, and from which he is said to have taken a canoe which he carried to England on his return. Locally this island was sometimes called *Pune*, but is known to the outside world as *Penikese*, which last name is spelled in quite a variety of ways. Nearly a mile from Penikese in an easterly direction is a gravelly shoal called Gull Island, and still farther away in the same direction lies Nashawena Island, which is distant a little over two miles, and on the southeast end of which, at Fox Point, a few Terns are said to breed. This at present treeless island is about three and a half miles long by one and a half miles wide, and contains about twenty-five hundred acres.

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<sup>1</sup> I have availed myself of Ricketson's History of New Bedford for several references.

To convey a better idea of the status of the Terns domiciled on Penikese Island, it may, perhaps, be well to refer to its history during the past fifty years, in order that the reader may know with what persistency these birds have retained their love of home, notwithstanding the trying ordeals they have been subjected to during this period. Considering that the island is small, and composed of two elevated portions connected by a stony beach, with little or no sheltering verdure for the concealment of their eggs or young, the hard green turf being kept closely fed by over one hundred sheep, it was not without surprise that I witnessed the perseverance of these birds.

It would appear that about fifty years ago Charles Gifford inherited Penikese Island from his father; he sold it to Captain John Flanders, a pilot of Marthas Vineyard, who in turn sold it to Captain Beriah Manchester, master of a whaling vessel, who after keeping it about six or seven years, sold it to Mr. John Anderson, of New York, who built a large addition at the southern side of the old Flanders house and connected it with an annex built by Captain Manchester. This house at present is nearly surrounded by the only trees (large-toothed poplar, *Populus grandidentata*, and red maple, *Acer rubrum*) growing on the island, they having been introduced there. They have reached a medium height, but are doing only fairly well, the struggle for existence apparently being severe. Mr. Anderson had used Penikese Island as a summer home for four or five years, when Professor Louis Agassiz of Cambridge, Mass., was in quest of a location for a school of natural history. It resulted in Mr. Anderson's presenting the island, in March, 1873, together with an endowment of fifty thousand dollars, to Professor Agassiz for this purpose. The gift was coupled with the condition that in case the school should ever be abandoned the island should revert again to Mr. Anderson. The school was continued until the death of the senior Agassiz, and for about a year afterwards, under the supervision of his son, when it was given up, and Mr. Anderson consequently again came into possession of Penikese. After Mr. Anderson's death, his executors sold it to Mr. McGrougthy of New York City and Messrs. George S. and F. A. Homer of New Bedford, Mass., who held it in common for about five years, at



which time the Messrs. Homer purchased the interest of the former and now own the entire island. There was a serious fire in 1891 which destroyed all the school buildings, so that at present there remains only a barn, and the original dwelling house.

In 1850 a Menhaden Fishery was established on the east side of the island, which was abandoned about two years afterwards.

Ever since the earliest recollection, the Terns of Penikese and Gull Islands have been returning year after year to breed, notwithstanding that during this entire period (with the possible exception of those years during which the island was occupied by the School of Natural History, and of which I have no information) they have annually been unmercifully robbed of their eggs. As a sample story of what has taken place *this* year, 1896, I quote the following, told to Mr. Howe by a resident of Cuttyhunk Island: "I took in *one day* in June, 1896, *one hundred and eighty-two eggs*; a friend of mine gathered *two hundred and ninety-five* in *one day*, and for the season *nine hundred*. The Portuguese fishermen who frequent Penikese harbor carry them off by the bucket full, as do other persons, during the season." There are laws on the statute books of this State for the protection of these Terns and their eggs, but who is there to *execute* them?

As far back as Flanders's time (and undoubtedly earlier) he established a local custom, which seems to have been observed ever since, that anyone might take eggs up to June 10, after which date the Terns were permitted to lay and hatch their eggs. The birds undoubtedly availed themselves of this favor and have thereby preserved their present status. These conditions have existed for certainly fifty years, and it seems difficult to understand why under such circumstances these Terns should still continue to frequent these islands in such numbers as to preclude correct estimates of them. I should guess, however, that there may be six or seven thousand birds domiciled there, a number much less than are at present living in Muskeget Island waters. My old friend, Dr. Thomas M. Brewer, who passed a week on Penikese in August, 1873, estimated that, inclusive of the young birds, there were about one thousand Terns on the southern portions of the island.

On becoming convinced that a large colony still existed on Penikese and Gull Islands, I determined to visit it, if the necessary permission could be obtained. This permission the owners, the Messrs. Homer, kindly granted, and offered me every facility for carrying out my plans. These plans I communicated to my friend, Mr. Reginald Heber Howe, Jr., a fellow-member of the Nuttall Ornithological Club, who had agreed to accompany and aid me in the investigation, and whose help I desire to here gratefully acknowledge. We visited and remained on Penikese and Gull Islands June 15 and 16, 1896, checking off and examining every nest and egg we were able to discover; a condensed report of which work is here furnished. It will no doubt surprise the reader, as it did us, when we remember that up to June 10 about all the eggs that were considered good had been taken for food purposes. Next year I hope to see more favorable conditions prevail, and that these beautiful birds will be better protected.

During our observations on Penikese I noted that in a very large number of instances even the apology of the few straws for a nest to keep the clutch of eggs together were wanting. I also noticed that every little depression in the sward, as also any shallow, saucer-like hollows on the boulders, or at their bases, were utilized by the Terns to deposit eggs in, that they might not be rolled away, the sward being so hard that the birds were unable to excavate an artificial hollow for their reception. At several places on the island some fence rails had been carelessly thrown down on the ground, and even the spaces between them had been made use of by both *Sterna hirundo* and *Sterna dougalli* as nesting sites. To me it was a new experience to see these birds, so essentially of the beaches and sands, alighting upon and walking about over what was to all intents and purposes an elevated and close cut lawn.

Neither Mr. Howe nor myself observed a chipped egg or a chick during our visit, which is what might be anticipated under the local custom of taking the eggs till June 10.

The considerably larger portion of the Terns domiciled on Penikese Island are Wilson's; with them, mixed indiscriminately, are a goodly number of Roseates, breeding. I failed in detecting the presence of the Arctic Tern (*Sterna paradisæa*). Gull Island

would seem to be better adapted for their breeding purposes; while there I shot a number of dark breasted birds in the hopes that some of them might prove to be *S. paradisæa*, but they were all Wilson's.

As stated, Penikese Island is composed of two parts connected by a stony beach; the southeast portion is called the neck, while the other is the main island. Thinking there might possibly be some future advantage in keeping the account of the nests and eggs found on each, separate, I have so arranged them, and also those found on Gull Island. All the eggs observed were normal, there being nothing unusual to record.

Main Island.				PENIKESE.				Neck.			
130 Nests of 1 egg each, in all 130 eggs				135 Nests of 1 egg each, in all 135 eggs				135 Nests of 1 egg each, in all 135 eggs			
386	"	2 eggs each,	" 772 "	308	"	2 eggs each,	" 616 "	308	"	2 eggs each,	" 616 "
228	"	3 "	" 684 "	208	"	3 "	" 624 "	208	"	3 "	" 624 "
6	"	4 "	" 24 "	5	"	4 "	" 20 "	5	"	4 "	" 20 "
7	"	5 "	" 35 "	3	"	5 "	" 15 "	3	"	5 "	" 15 "
		Vagrant eggs	35 "			Vagrant eggs	9 "			Vagrant eggs	9 "
757			1680	659			1419				

## GULL ISLAND.

10 Nests of 1 egg each, in all 10 eggs.

15	"	2	"	"	30	"
16	"	3	"	"	48	"
0	"	4	"	"	0	"
0	"	5	"	"	0	"
		Vagrant eggs	2	"		
40					90	

Total for Penikese Island, 1416 nests, 2055 eggs.

"	Gull Island.	40	"	88	"
"	Vagrant eggs			46	"

The 46 eggs designated as 'vagrant' were found by themselves with no appearance of their having been deposited by the birds where found.

*Gull Island* is but a small gravelly shoal of about half an acre in extent. It is elevated only three or four feet above high water mark. As far as I have been able to learn, it is at present only

slightly smaller than it was fifty years ago. A third of the island, on its northern side, is fairly well covered with coarse herbage and beach grass (*Ammophila arundinacea*). It is on this shoal that a little colony of about one hundred and fifty Roseate Terns (*S. dougalli*) and a few Wilson's (*S. hirundo*) are domiciled. Mr. Frederick S. Allen, who has been a resident on Cuttyhunk for fifty-four years, informs me that when he was a boy "the Terns were more abundant on Gull Island than on Penikese, to which island they extended to breed." He also thinks "there are as many Terns at the present time as formerly; cannot perceive any difference in their numbers." It nevertheless appears to the writer as unlikely, from the size of Gull Island, etc., that it could ever have furnished breeding quarters for more than a few hundred birds.

The first eggs were noted on Penikese Island in 1892 on May 20. In 1893 the Terns arrived May 10, in the night, an advance guard of several hundred being noted early the following morning at daylight; these all left before noon of the 11th, and on the morning of the 12th, before daylight, immense numbers had again arrived. In 1894 the advance guard arrived on the night of May 7. In 1895 the first eggs were noted on May 24. In 1896 the Terns commenced to arrive during the night of May 9; they were in evidence at daylight on the 10th, and continued to arrive all day, and on the morning of the 11th the usual colony had taken possession of the island. I am informed that the Terns had considerably diminished in numbers on Penikese by August 28, and that the young birds were all in the air and able to care for themselves; that after September 1 there were but few birds left, and that by the 17th all had departed. It was thought that those remaining the longer time did so in order to care for a few mutilated young birds that needed aid. These maimed young having been killed, the old birds departed as above. A goodly number of young birds were raised this season, as the owners of the island inform me that they did not allow them to be molested.

A LIST OF THE SPECIES OF ANSERES, PALUDICOLÆ,  
AND LIMICOLÆ OCCURRING IN THE  
STATE OF LOUISIANA.

BY E. A. MCILHENNY.

THIS list is based on personal observations, extending through the past nine years. During that time I have observed our birds throughout the entire lake and coast regions of Louisiana, and all species included in this list have been taken.

I have endeavored to give the local names used by the natives; most of them it will be observed are French or of French origin, and the French names are the ones most in use.

It is a curious fact that so many of the Shore Birds, whose breeding grounds are in the Arctic regions, should be resident here. By the middle of June they all attain their full plumage and congregate in large numbers on the sand islands, where they cover the flats and shallow bays in search of food.

1. *Merganser americanus*. AMERICAN MERGANSER.—Known as *Bec Scie de mer* and Sea Sawbill. A common winter resident, found only in salt water.

2. *Lophodytes cucullatus*. HOODED MERGANSER.—Known as *Bec Scie* and Cotton-head. Very common in winter; resident in small numbers; breeds.

3. *Anas boschas*. MALLARD.—Known as *Canard Français* and French Duck; also as Green-head. A winter resident, and the best known duck in Louisiana. On April 28, 1896, I shot a male of this species that was mated to a female *Anas fulvigula maculosa*, and collected the nest with 10 eggs. This is the only record I have of this duck's breeding in Louisiana.

4. *Anas fulvigula maculosa*. MOTTLED DUCK.—Known as *Canard noir d'été*, and Summer Black Mallard. Resident; common; breeds.

5. *Anas obscura*. BLACK DUCK.—Known as *Canard noir*, and Black Mallard. A common winter resident.

6. *Anas fulvigula*. FLORIDA DUCK.—I took a pair of these ducks, with their nest and 7 eggs, on June 3, 1895, at Timbalier Island, on the south-east coast of Louisiana.

7. *Anas strepera*. GADWALL.—The *Canard gris*, Gray-duck, or Red-wing, as it is variously known, is a common winter resident.

8. *Anas americana*. BALDPATE.—Commonly known as *Zan-zan*, from the noise it makes; also as Widgeon and Whistling Duck. A very

common winter resident, and a good duck for the table, but rarely shot for market, as they get so fat they will not bear transportation.

9. *Anas carolinensis*. GREEN-WINGED TEAL. — Commonly known as *Sarcelle*. The most abundant winter resident of all the ducks.

10. *Anas discors*. BLUE-WINGED TEAL. — Known as *Printempsnierre* in the spring, and *Automnierre* in the fall. Very common during the spring and fall months; a few winter on the coast, but most of them go further south.

11. *Spatula clypeata*. SHOVELLER. — A very common duck during the winter. Commonly known as *Mesquin* and Spoonbill.

12. *Dafila acuta*. PINTAIL. — Commonly known as *Pian Queue* from the resemblance of the long feathers of the tail to a grass called *Pian*. Also known as Sprig-tail and Long-necked Duck. One of the most plentiful ducks in Louisiana, during the winter.

13. *Aix sponsa*. WOOD DUCK. — Known as *Branchier*; also as Squealer. This most beautiful of all our ducks is a common resident, and breeds wherever found.

14. *Aythya americana*. REDHEAD. — Commonly known as *Canard Violon*, because in flying it makes a noise like a violin, with its wings. Quite a common winter resident, in the bays of the southeast coast of Louisiana.

15. *Aythya vallisneria*. CANVAS-BACK. — Known as *Canard Cheval*, because of the sloping head. A winter resident, found always with the Redheads, but not so plentiful.

16. *Aythya marila nearctica*. AMERICAN SCAUP DUCK. — Most commonly known as *Dos gris*; also as Blue-bill. A common winter resident, on large bodies of water.

17. *Aythya affinis*. LESSER SCAUP DUCK. — A winter resident, more common than the preceding species, and not distinguished from it by local hunters. This duck remains with us in considerable numbers until late in the spring, and I have often seen flocks of 50 or more as late as June 1.

18. *Aythya collaris*. RING-NECKED DUCK. — Known as *Canard noir*. and Raft-duck. A very common winter resident.

19. *Clangula clangula americana*. AMERICAN GOLDEN-EYE. — Known as *Plongeur*; also as Golden-eye. A very common winter resident.

20. *Charitonetta albeola*. BUFFLE-HEAD. — Commonly known as *Marionnette* and Butter-ball. A common winter resident, on the coast.

21. *Erismatura jamaicensis*. RUDDY DUCK. — The only name I have heard applied to this duck is God Damn, on account of its worthlessness. A common winter resident, on the salt water bays.

22. *Dendrocygna autumnalis*. BLACK-BELLIED TREE-DUCK. — Commonly known as Fiddler Duck. Not common. Resident, as a few remain on the coast all the year. I have never taken them breeding.

23. *Dendrocygna fulva*. FULVOUS TREE-DUCK. — Known as Yellow-bellied Fiddler Duck, also Long-legged Duck. Resident. Breeds. Not common.



24. *Chen hyperborea*. LESSER SNOW GOOSE. — Commonly known as *Oie blanche*; also as White Brant. Very common in winter. Small flocks of cripples remain on the coast during the summer, and the cattlemen around Chenier au Tigre claim they occasionally breed there.

25. *Chen hyperborea nivalis*. GREATER SNOW GOOSE. — A common winter resident, not distinguished locally from the former.

26. *Chen cærulescens*. BLUE GOOSE. — Commonly known as *Oie bleu* and Blue Brant. A very common winter resident.

27. *Anser albifrons gambeli*. AMERICAN WHITE-FRONTED GOOSE. — Known as *Oie caille* and Gray Brant. A common winter resident.

28. *Branta canadensis*. CANADA GOOSE. — Known only as *Outarde*. A common winter resident on the prairies of Louisiana, but rarely goes to the coast.

29. *Olor columbianus*. WHISTLING SWAN. — A winter resident on the southwest coast of Louisiana. I have never taken them east of Marsh Island. Commonly known as *Cygne*.

30. *Olor buccinator*. TRUMPETER SWAN. — Also known as *Cygne*. A winter resident on the coast; more common than the preceding species.

31. *Grus americana*. WHOOPING CRANE. — Resident; breeds. Known as *Grue blanche*.

32. *Grus mexicana*. SANDHILL CRANE. — Common. Resident. Breeds. Known as *Grue bleu*.

33. *Rallus elegans*. KING RAIL. — An abundant resident, breeding in all marshes, both fresh and salt. Commonly known as Rail and Marsh Hen.

34. *Rallus longirostris crepitans*. CLAPPER RAIL. — Known as Rail, Marsh Hen, and Prairie Hen. A common resident in all salt marshes joining the main land.

35. *Rallus crepitans saturatus*. LOUISIANA CLAPPER RAIL. — A common species wherever found; its range, however, is restricted to the mangrove islands along the southeast coast, between Point au Fer and Raccoon Pass. Locally known as Mangrove Hen. Resident. Breeds.

36. *Rallus virginianus*. VIRGINIA RAIL. — An abundant winter resident.

37. *Porzana carolina*. SORA. — Commonly known as Ortolan. Resident in small numbers. Common in winter, breeds sparingly.

38. *Porzana noveboracensis*. YELLOW RAIL. — Winter resident, not uncommon.

39. *Porzana jamaicensis*. BLACK RAIL. — A rare winter resident.

40. *Ionornis martinica*. PURPLE GALLINULE. — An abundant summer resident. Breeds in large numbers, wherever an extent of marsh and water is found.

41. *Gallinula galeata*. FLORIDA GALLINULE. — Known as *Poule d'eau de marais*. A common resident; breeds.

42. *Fulica americana*. AMERICAN COOT. — Known as *Poule d'eau* and Blue Peter. Resident in small numbers. Very common in winter. Breeds sparingly.

43. *Philohela minor*. AMERICAN WOODCOCK.—Known as *Bécasse du bois*, and Woodcock. Resident in small numbers, more common in winter. Breeds regularly.
44. *Gallinago delicata*. WILSON'S SNIPE.—Commonly known as *Cachecache*, and Jack Snipe. An abundant winter resident.
45. *Macrorhamphus griseus*. DOWITCHER.—Commonly known as *Dormeur*. Resident along the coast. I have never found them breeding.
46. *Macrorhamphus scolopaceus*. LONG-BILLED DOWITCHER.—Known as *Dormeur*. A common resident on the coast, does not breed.
47. *Recurvirostra americana*. AMERICAN AVOCET.—Known as *Bécassine de mer*. A rare winter visitant.
48. *Himantopus mexicanus*. BLACK-NECKED STILT.—Known as *Bécasse du marais*. Abundant resident. Breeds.
49. *Tringa canutus*. KNOT.—Known only as *Ventre rouge*. An abundant resident; does not breed.
50. *Tringa maculata*. PECTORAL SANDPIPER.—Only known as *Churook*. A very abundant bird during migration.
51. *Tringa minutilla*. LEAST SANDPIPER.—An abundant resident; does not breed.
52. *Tringa alpina pacifica*. RED-BACKED SANDPIPER.—An abundant resident along the coast. Commonly known as *'Ti ventre noir*. Does not breed.
53. *Ereunetes pusillus*. SEMIPALMATED SANDPIPER.—Abundant during the spring and fall migration.
54. *Calidris arenaria*. SANDERLING.—Occurs only during the fall migration.
55. *Limosa fedoa*. MARBLED GODWIT.—Commonly known as *Bécassine*; also as Sea Snipe. Quite common during the winter along the coast.
56. *Totanus melanoleucus*. GREATER YELLOW-LEGS.—Known as *Pied jaune*, and Yellow-leg Snipe. Resident; most abundant during the winter. Does not breed.
57. *Totanus flavipes*. YELLOW-LEGS.—Resident; most abundant in winter. Does not breed.
58. *Totanus solitarius*. SOLITARY SANDPIPER.—Abundant during the spring and fall.
59. *Symphemia semipalmata*. WILLET.—Commonly known as *Vive Vire*. A common and well-known resident; breeds abundantly.
60. *Bartramia longicauda*. BARTRAMIAN SANDPIPER.—Universally known as *Papabot*. Abundant during the spring and fall.
61. *Tryngites subruficollis*. BUFF-BREASTED SANDPIPER.—Commonly known as *Churook*, and Robin Snipe. Abundant during spring and fall migration.
62. *Actitis macularia*. SPOTTED SANDPIPER.—Abundant during the spring and fall; a very few winter on the coast.
63. *Numenius longirostris*. LONG-BILLED CURLEW.—Commonly known as *Corbijo*. An abundant resident, breeding along the coast.

64. *Numenius hudsonicus*. HUDSONIAN CURLEW.—An abundant resident. Does not breed.
65. *Numenius borealis*. ESKIMO CURLEW.—<sup>1</sup>A common winter resident along the coast.
66. *Squatarola squatarola*. BLACK-BELLIED PLOVER.—Commonly known as *Gros yeux*, *Ventre noir*, and Bull Head. An abundant resident. Does not breed.
67. *Charadrius dominicus*. AMERICAN GOLDEN PLOVER.—Commonly known as *Gros tete*. A common bird during migration. A few winter along the coast.
68. *Ægialitis meloda circumcincta*. BELTED PIPING PLOVER.—Not an uncommon winter resident.
69. *Ægialitis vocifera*. KILLDEER.—An abundant resident; breeds commonly.
70. *Ægialitis semipalmata*. SEMIPALMATED PLOVER.—A rare winter visitant.
71. *Ægialitis nivosa*. SNOWY PLOVER.—A rare winter visitant.
72. *Ægialitis wilsonia*. WILSON'S PLOVER.—An abundant resident, breeding all along the coast. Commonly known as *Collier*.
73. *Arenaria interpres*. TURNSTONE.—Commonly known as Pigeon. An abundant resident, on the coast.

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NESTING OF THE PARULA WARBLER (*COM-  
PSOTHLYPIS AMERICANA*) IN CAPE MAY  
COUNTY, NEW JERSEY.<sup>1</sup>

BY MARK L. C. WILDE.

PERHAPS no other portion of the State of New Jersey is better adapted as a breeding ground for the Parula Warbler than Cape May County. Quite a number of its streams, including Dennis Creek and tributaries, are dammed off to supply power to the various saw and grist mills, thereby forming mill-ponds, and in some cases these streams spread over a considerable area, owing to the extreme shallowness of the valleys.

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<sup>1</sup> Read before the Delaware Valley Ornithological Club of Philadelphia.

I desire to speak more particularly of the ponds, and large shallow stretches of water above the mill-dams, together with the small winding streams which supply them, as these are the localities where the long-bearded lichen or 'beard-moss' (*Usnea barbata*), in which the Parula Warblers almost invariably construct their nests, grows most abundantly.

The mill-ponds formed by the streams north of the Dennis Creek are wholly or partly hemmed in by dense thickets of various kinds of bushes, beyond which, almost as far as the eye can see, the higher dry land or as I might better say the hot 'Jersey Sand-Barrens,' are overgrown with scrub-oaks (*Quercus ilicifolia*), interspersed with a few tall pines (*Pinus rigida*), while other portions are cleared for farming purposes.

In the upper portion of the northern mill-ponds the numerous small cedar-bushes, which when fullgrown may only be termed scrub-cedars (*Chamaecyparis thyoides*), together with other trees and bushes, all of which are often matted together in small clumps or islands, are nearly all draped with festoons of 'beard-moss.' In addition to this, dead stumps of the cleared off timber still project out of the water, and many of their decayed tops being covered with smaller vegetation and 'beard-moss,' also help to beautify the mill-ponds. Various ericaceous bushes and open sphagnum bogs are scattered throughout this region, and these bogs often continue to the very sources of the small streams which supply the mill-ponds with water.

The Parula Warblers breed undisturbed in these secluded spots, where the Kingbirds may be seen with outstretched wings, swaying on the topmost branches of the cedars, and where insects and Hummingbirds (*Trochilus colubris*) may be heard, as they swiftly wing their way across the ponds. Uninterested persons seldom if ever intrude, probably on account of the 'out-of-the-way' localities, and the difficulties connected with penetrating the dense bushes which surround their breeding grounds.

The trees here in the upper portion of the mill-ponds increase in size, gradually culminating into dense red-water cedar-swamps, as they follow the small streams to their sources.

Viewed from a short distance these saturated cedar-swamps present the appearance of a solid mass of dark green, and when

in the interior, the eye can penetrate but a few yards among the thickly clustered trunks. The Parula Warblers do not breed within these dense, dark, cedar-swamps, but may occasionally be found breeding on their borders.

Between that portion of the ponds where the cedars are more open, and the dense cedar-swamps above, the small channels are so choked up with bushes, and tangled, twisted, moss-covered branches of the scrub-cedars, that progress in a flat-bottom boat (which is the safest way to travel through this region, on account of the uncertainty of the bogs) is very slow and laborious.

A few remarks on the streams, and southern tributaries of Dennis Creek, would probably be of interest.

The mill-dam on Sluice Creek, the southeastern branch of Dennis Creek, forms a lake half a mile in length, and marks the north-western extremity of the 'Timber and Beaver Swamp,' which stretches away nearly three miles to the east. The extensions of this creek south of the lake referred to, are gradually drained of their water by the swamps, which as I have already intimated, have been formed by the flatness of the land.

These swamps are bordered with tall bushes, beyond which are woods of chestnut, oak, beech, laurel, and pitch-pine, interspersed with a large quantity of holly, while the swamps themselves outside of the main channels, are overgrown with sassafras, maple, cedar, gum, magnolia, and various kinds of bushes, including bush-huckleberry, cranberry, alder and cedar, the whole being interwoven with thorny green-briars. The crooked and twisted branches of these trees and bushes are nearly all draped with beard-moss. Numerous open sphagnum and cranberry bogs are also scattered throughout this region.

Among the beautiful moss-covered trees and bushes already described, the Parula Warblers congregate in large numbers, to make their summer home. They arrive from the south apparently already paired, about the first of May, and by the second week have commenced nest building.

Nests can be found from the border to the middle of the mill-ponds and swamps, and may be looked for anywhere from under the tip of an outstretched or drooping branch to against the tree trunk, or in smaller bushes, and from one foot above the water to

twenty feet high. Generally, however, on account of the beard-moss growing more abundantly on the lower branches of the trees, under eight feet may be considered the average height. From the data of thirty-three nests the summary is as follows:—

1	foot high,	1 nest.
2	feet high,	2 nests.
2½	" "	6 "
3	" "	7 "
3½	" "	2 "
4	" "	1 nest.
4½	" "	2 nests.
6	" "	2 "
7	" "	3 "
8	" "	3 "
13	" "	1 nest.
15	" "	2 nests.
20	" "	1 nest.

Parula Warblers seem to colonize naturally to a larger extent than any of our other Warblers, probably on account of the beard-moss (of and in which, as I have said before, this species almost exclusively builds its nests), growing more heavily on certain patches of trees and bushes, than on others.

Having selected a suitable spot the female alone assumes the task of nest building, while her mate leisurely feeds among the tangled branches, and occasionally clinging to a twig head downward in Chickadee fashion, he reaches here and there for lurking insects, and flying a short distance, pauses for a moment to emit his song.

The nest is invariably placed in a hanging position. The female usually selects a tree in which the beard-moss grows quite thickly, and here within the tufts, she loops and weaves together the inside hanging particles of moss, forming a beautiful nest, much resembling the style of the Baltimore Orioles. The birds are careful that the moss shall be left hanging in its natural way, from the bottom and sides of the nest, and often so conceal it, that it can only be found by a close and careful observer. Into the structure the bird then carries thread-like pieces of beard-moss, collected from some nearby tree. This moss is used exclusively



by some Parulas in lining their nests, while others add a few horse-hairs and a yellow down which is taken from the stems of swamp ferns. The nest is very compact and closely woven, occasionally having a few pine-needles stuck into it around the outside, probably to help support and pin it to the hanging particles of moss.

The entrance, which is always on a level with the top of the bowl, is made through the moss on the side, very often directly under the limb where the moss is parted. The walls of the bowl, being at least a half an inch in thickness, form a platform which is often flattened out resembling a small mat, on which the bird rests when entering or leaving the nest. Some nests have two or more entrances, either left as peep windows for escape, or unintentionally caused by the thinness of the moss above the bowl.

I have examined a few nests where the entrance was made from the top, the nest having been suspended either between two twigs or between the trunk of a tree and an adjoining tuft, but such cases as these are rare, and may be considered departures from their regular style of building. From over a hundred nests of this species, found during the past three years, nearly all were partly or entirely roofed over, with the entrances from the sides as previously described.

One nest collected during May, 1893, was suspended from a two inch limb, containing little or no moss, outside of that of which the nest was constructed, but this I do not consider a typical nest.

The inside measurements of the nests vary, ranging from about one and a half to two inches both in depth and diameter.

I have watched Parula Warblers enter their nests, and have seen both sitting on their eggs and young, by keeping perfectly still and quiet in a row-boat, at a distance of not more than from three to four feet.

With very few exceptions, the number of eggs laid is four, which show remarkable variation in size and shape. They have a white ground color, and are more heavily dotted with reddish brown and lilac at the larger ends, often forming a ring round them.

Full clutches of fresh eggs may be found on the 20th of May, and I found one nest containing young just hatched on the 4th of June, 1893.

Although I have seen a number of small snakes, throughout these ponds and swamps, drop off the lower branches of the trees and bushes at my approach, I have never found any nests of the Parula Warblers which had been disturbed by them.

On May 21, 1894, after a heavy wind and rain storm which lasted some four or five days, the swamps in northern Cape May County were completely flooded. I found one Parula's nest during this storm which had been washed out, and probably many others on the lower branches were destroyed. The land bordering one of these swamps northwest of Dennisville, which on May 18 seemed very dry, was also flooded for some distance, and many Black and White Warblers, a nest of which was found here on that date, were seen feeding among the trees, and no doubt not only their nests, but many others of the ground nesting species were destroyed.

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## DESCRIPTION OF A NEW TOWHEE FROM CALIFORNIA.

BY JOSEPH GRINNELL.

### *Pipilo clementæ*, new species. SAN CLEMENTE TOWHEE.

*Specific characters.*—Differs from *P. maculatus megalonyx* in its larger size, and in having the dark upper and anterior parts in both sexes of a much lighter shade.

*Type*, ♂ ad., No. 2290, Coll. J. G., Smuggler's Cove, San Clemente Island, California, Mar. 31, 1897.

Head and neck all around sooty seal brown, purest and darkest on the throat. Upper parts, including wings and tail, sooty, 'washed' with olive-gray. Rump lighter. Upper tail-coverts finely barred with dusky. Distribution of white markings, and rest of plumage, as in ♂ *P. m. megalonyx*.

*Type*, ♀ ad., No. 2291, Coll. J. G., Smuggler's Cove, San Clemente Island, California, Mar. 31, 1897.

Much lighter than ♀ *P. m. megalonyx*. Head and neck all around, and upper parts, broccoli brown. Wings and tail darker. Rump gray. These colors are not pure and continuous, but the feathers have darker centres with light edgings. Plumage otherwise as in *P. m. megalonyx*.

*Habitat*. — San Clemente Island, California.

The male of *P. clemente* thus closely resembles the female of *P. m. megalonyx* in the tone of the upper parts, and the female of the insular form is still lighter. From the accompanying table of measurements the difference in size, especially in the proportions of the bill, is evident.

During my six days' visit on San Clemente Island, from March 28 to April 3, the past spring, I did not see more than four others of these Towhees besides the six specimens secured. So that they can not by any means be numerous. However, my observations were confined to the south end of the island, so possibly they are more abundant toward the north end. They were shy, and usually remained closely hidden in the clumps of wild cherry bushes which lined the beds of the ravines. The reproductive organs of the single female taken, showed that oviposition had already taken place.

The notes of the San Clemente Towhee are quite unlike those of the mainland form. The (*tow*)-*hee* was more flimsy, and not so loud. The Catbird call-note which is so characteristic of *P. m. megalonyx*, appeared to be unknown to the island bird, as I did not once hear it.

I have seen no Towhees from the other Southern Californian islands, so that more material may relegate *Pipilo clemente* to subspecific rank, but reasoning from analogy, I think not.

MEASUREMENTS IN INCHES OF A FEMALE *Pipilo clemente* FROM SAN CLEMENTE ISLAND, CALIFORNIA.

No. Coll. J. G.	Date.	Length.	Wing.	Tail.	Tarsus.	Hind Claw.	Bill from Nostril.	Exposed Culmen.	Depth of Bill at Nostril.
2291	Mar. 31, '97.	8.37	3.12	3.90	1.06	.51	.41	.54	.34

MEASUREMENTS IN INCHES OF FIVE MALES OF *Pipilo clemente* FROM  
SAN CLEMENTE ISLAND, CALIFORNIA.

No. Coll. J. G.	Date.	Length.	Wing.	Tail.	Tarsus.	Hind Claw.	Bill from Nostril.	Exposed Culmen.	Depth of Bill at Nostril.
2266	Mar. 30, '97.	8.75	3.50	4.31	1.04	.64	.42	.54	.35
2267	Mar. 30, '97.	8.75	3.37	4.26	1.11	.51	.41	.53	.32
2290	Mar. 31, '97.	8.62	3.37	4.20	1.09	.52	.44	.55	.35
2312	April 1, '97.	8.62	3.50	4.25	1.12	.48	.43	(.56)	—
2319	April 2, '97.	8.50	3.56	4.30	1.09	.53	.42	.57	.33
Average		8.65	3.46	4.26	1.09	.53	.42	.55	.34

MEASUREMENTS IN INCHES OF SIX MALES OF *Pipilo maculatus megalonyx*  
FROM PASADENA, CALIFORNIA.

No. Coll. J. G.	Date.	Length.	Wing.	Tail.	Tarsus.	Hind Claw.	Bill from Nostril.	Exposed Culmen.	Depth of Bill at Nostril.
643	Feb. 3, '96.	8.12	3.37	4.09	1.07	.52	.38	.52	.32
660	Feb. 22, '96.	8.50	3.50	4.18	1.05	.57	.39	.53	.33
665	Feb. 26, '96.	8.50	3.25	4.03	1.06	.52	.42	.55	.31
728	Mar. 19, '96.	8.00	3.37	4.00	1.06	.51	.41	.53	.32
2051	Feb. 6, '97.	8.37	3.37	3.90	1.03	.47	.37	.49	.33
2052	Feb. 6, '97.	8.37	3.37	4.18	1.04	.53	.38	.51	.33
Average		8.31	3.37	4.06	1.05	.52	.39	.52	.32

## AN ADDITION TO NORTH AMERICAN PETRELS.

BY WILLIAM PALMER.

THE great storm that occurred on the coast of the South Atlantic States on August 26-27, 1893, resulted in a great destruction of seabird life, besides driving many individuals far inland. At such times specimens are likely to be obtained that are rare or unusual in certain localities, and occasionally one that is considerably out of its normal range; this storm was no exception in this respect.<sup>1</sup>

Two Petrels were received by me at that time, both having been taken within the limits of the city of Washington. Both specimens prove to be typical of Knudsen's Petrel, *Oceanodroma cryptoleucura* Ridgway, probably a Pacific Ocean species. This bird was described in 1882<sup>2</sup> from some specimens which had been in the National Museum collection since 1866. These were collected on or about some of the Hawaiian Islands (Waimea and Kanai) by Valdemar Knudsen, sometime previous to that year, no dates being on the labels. Mr. C. H. Townsend of the U. S. F. C. S. 'Albatross' collected four specimens near Wenman Island, of the Galapagos Group, on April 4, 1891, which are also in the National Collection. There are a number of specimens in the British Museum from several localities in the Hawaiian Islands, from Australia, and from various islands in the eastern Atlantic, — Funchal, Madeira; Desertas Islands, Porto Santo Island, St. Helena and Great Salvage Island. A specimen was also picked up December 5, 1895, on the coast of Kent, England. Thus a fairly cosmopolitan range seems imminent for the bird. The species bears a very great general resemblance to Leach's Petrel but differs in so many features as to be clearly distinguishable. In the following descriptions I have italicized these differences.

*Oceanodroma leucorhoa*. LEACH'S PETREL.

General color, sooty brown, nearly unicolor, but slightly paler beneath. Tail *strongly* forking; upper tail-coverts *dingy* white, some (under)

<sup>1</sup> Auk, 1893, 361; 1894, 85, 181.<sup>2</sup> Proc. U. S. Nat. Mus., IV, 1882, 337.

feathers almost entirely brown; all *irregularly* tipped with the dark body color, and *all* having *brown shafts*. Rectrices entirely brown, paler at base, and sometimes having (except central pair) the base white for a short distance. Outer toes slightly shorter than the middle. Toe nails long and narrowish.

***Oceanodroma cryptoleucura*. KNUDSEN'S PETREL.**

Similar to *O. leucorhoa* in size, color and marking, but with *slightly* forking tail. Upper tail-coverts *pure* white, the longer feathers *broadly* and *somewhat evenly* tipped with the dark body color; all having the shafts *white*. Rectrices (except central pair) *white* at base for *fully an inch* and *extending further* along outer webs of the outer pair. Outer toes *decidedly* shorter than the middle. Toe-nails *shorter* and *broad*er.

*Measurements, from Ridgway's Manual.*

	Wing.	Tail.	Forking.	Tarsi.
<i>O. leucorhoa</i>	6.00-6.30	3.50-4.00	.80-.90	.90-.95
<i>O. cryptoleucura</i>	5.80-6.30	3.00-3.15	.20-.30	.85-.90

*Measurements of the Washington Specimens.*

3233 ♀ W. P. Coll.	6.20	2.94	.12	.90
3234 ♀ "	6.00	2.85	.15	.90

Length of No. 3234, 7.75; extent, 19.10.

The greater amount of white at the base of the tail-feathers, the broad dark tips of the upper tail-coverts, and the slightly forked tail will readily serve to identify this species. The Hawaiian Islands, Galapagos and Washington birds agree well in these characters.

Both my specimens are molting and seem to be adults and are both females. In both the bulk of the feathers have been changed except on the neck and throat. The wings in both have been entirely renewed, the outer pair of feathers in each showing remains of the sheaths at their bases. In one, No. 3234, the tail has been entirely renewed, no remains of the sheaths showing; while in the other but nine feathers are full grown, the next to the outer pairs being rather more than two thirds their full length, and the fourth on the right side is nearly half grown. Some of the upper tail-coverts lack their full growth on both.

The capture of one of these specimens came about in a rather peculiar way for a Petrel. The first was received from a boy who



had shot it on August 28, while it was flying over the Anacostia River, near the Navy Yard Bridge, with several others. The other I received the next day from a friend who had obtained it from a lady who had secured it in the following decidedly novel manner. Their house on Capitol Hill, in Washington, has a gable roof with a small round window facing the east. During the early progress of the storm it was remembered that this window was open and one of the family went upstairs to close it. This bird was found fluttering in the room, evidently having entered through the window. It was secured and efforts made to feed it, but two days later it died, and then came into my hands. On receipt of the first specimen, as a Petrel is decidedly a rare acquisition for Washington, I went to show it to Mr. Ridgway, as we usually do when receiving rarities, but unfortunately he was absent. The almost even tail was noticed, but as new feathers were found and no specimens of *leucorhoa* were available, it was concluded that molting was the cause of the shortness. Upon receiving the second specimen and noting no difference between the two I concluded they were the same. I had no specimens of Leach's then with which to compare, and of course never dreamed that a Sandwich Islands species, unknown to North America, could by any possibility be in my possession. Recently having to compare some Alaskan Petrels I noticed disagreements and accordingly submitted them to the inspection of Mr. Ridgway, who at once recognized his own species and expressed astonishment at seeing it under such circumstances. Thus a most unexpected species is added to our local list and at the same time also to North America. It is truly a wanderer of whose home nothing is known. Other specimens may exist in collections, though, like these, under another name. No. 3234 is now No. 154436 of the U. S. National Museum catalogue.

DESCRIPTION OF A NEW *EMPIDONAX*, WITH NOTES  
ON *EMPIDONAX DIFFICILIS*.

BY HARRY C. OBERHOLSER.

THERE are in the collection of the United States Biological Survey five specimens of an *Empidonax*, taken by Mr. Clark P. Streater on the Santa Barbara Islands, California. These prove to be quite distinct from their nearest mainland relative *E. difficilis*, and to constitute thus an interesting and apparently undescribed form, which, in view of its island habitat, may very appropriately be designated

*Empidonax insulicola*, sp. nov.

CHARS. SP.—*E. difficilis* similis, sed supra obscurior et brunnescentior; infra pallidior, pectore vix ochraceo-brunneo lavato.

AL., 64.5–69.5 (68.2) mm.; caud., 59.5–64 (61.4) mm.; culm. exp., 11–13 (11.8) mm.; tars., 17–18 (17.7) mm.

*Habitat*.—Insulae Santa Barbara, California.

*Description*.—*Type*, male adult, No. 140078, U. S. Nat. Mus., Biological Survey Collection; Santa Rosa Island, California, July 3, 1892; C. P. Streater. Above olive brown, slightly paler and more greenish on rump, darker on head. Wings fuscous, the lesser coverts edged with the color of the back; median and greater coverts tipped with brownish white, this forming two conspicuous wing-bands; secondaries and tertials margined externally with the same color. Tail fuscous, the outer webs of the feathers very narrowly edged with the color of the back. Lores and orbital ring dull yellowish white, the former somewhat mixed with olive; sides of head and neck like the back, but rather lighter, and shading gradually into the color of under parts; chin and throat dull grayish white, faintly washed with yellow; remainder of lower surface straw yellow, slightly paler on jugulum and crissum, inconspicuously tinged across breast and on sides and flanks with olive brown; bend of wing below buff; axillars and inferior wing-coverts straw yellow.

From *Empidonax cineritius*, with typical specimens of which it has been compared, this new species differs in being darker, less ashy, and somewhat more olivaceous above—particularly on the head—and rather deeper, more continuously yellow below. From *E. difficilis* it may be readily distinguished by its darker, browner upper parts, especially the head, and by the usually much paler

colors of the under surface, this most noticeable anteriorly, the jugulum and breast having little of the brownish ochraceous suffusion so apparent in most specimens of *difficilis*. The sides of neck and head are somewhat grayer, the throat is usually distinctly whitish, and the wing-bands appear to be rather more purely white. It will thus be seen that while in some characters *Empidonax insulicola* is to a certain extent intermediate between *difficilis* and *cineritius*, yet in the olive brown color above it departs equally from both, though not in the direction of either.

The characters above ascribed to *insulicola* are reasonably uniform in the series of five specimens examined. One bird, however, from Santa Catalina Island, has the throat rather more clearly white, and the upper parts a little lighter and more olivaceous, but these differences are apparently not material.

So far as it has been possible to ascertain, the only previous record of any representative of the genus *Empidonax* from the Santa Barbara Islands is by Mr. Eli W. Blake, Jr., who gives *Empidonax difficilis* as common on Santa Cruz Island.<sup>1</sup> Mr. Blake's *E. difficilis* is, of course, undoubtedly the *E. insulicola* of the present paper.

For comparison in this connection there have been brought together some 85 specimens of *Empidonax difficilis*, many of them taken in the breeding season, this series representing very fully the North American range of the species. Among these there are very few indeed which can not be distinguished from *Empidonax insulicola* even without comparison, being both lighter and more olivaceous on the upper surface, and more deeply yellow beneath. A considerable range of variation is, however, exhibited, which is not satisfactorily attributable to geographical causes. A specimen from Comox, B. C., and another from Parley's Park, Utah, are nearly as dark above as *insulicola*, but are much more yellowish olivaceous, and are, moreover, easily distinguished by the very deep brownish suffusion on the breast.

The palest birds examined are from the southwestern border of the United States, but with these occur, during the breeding season and often in the same localities, some of the darkest birds in the

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<sup>1</sup> Auk, IV, 1887, 329.

whole series, together with others which are apparently intermediates. Whether or not this occurrence of paler birds in the southwestern United States shows an inclination of *difficilis* toward intergradation with *cineritius* is not possible certainly to determine from the material at present available, but the greater frequency of such examples in southern California seems at least to indicate that such may be the case. One bird from the Santa Catalina Mts., Pinal County, Arizona (U. S. N. M. No. 117235), is very pale throughout, and differs from *cineritius* chiefly in the quite continuously yellow under parts. A specimen from Napa Valley, California (U. S. N. M. No. 12880), is very similar to the preceding, but is browner and slightly darker above, less extensively yellow below, and rather darker across the breast. Whether or not these two specimens are to be called *cineritius* seems somewhat doubtful. I very much hesitate to record them as such, though they certainly do not represent *difficilis*, unless they may be considered abnormally faded summer birds.

The young of *Empidonax difficilis* appears to be, as a rule, very brown above and light yellowish or buffy below (not dull white as mentioned by Mr. Ridgway<sup>1</sup>), although two immature specimens from Sitka, Alaska, are as bright olive above and as deep yellow below as almost any of the adult examples.

MEASUREMENTS OF SPECIMENS OF *Empidonax insulicola*.

U. S. N. M. No., Biol. Surv. Coll.	Sex and Age.	Locality.	Date.	Wing.	Tail.	Exposed Culmen.	Culmen from Nostril.	Tarsus.	Middle Toe with Claw.
140076	♂ ad.	Santa Catalina I., Calif.	Apr. 15, 1892.	69.5	61	11	9	18	12
140077	♂ ad.	Santa Rosa I., Calif.	July 3, 1892.	64.5	60.	13	9	18	12.5
140078	♂ ad.	" " "	" "	68	59.5	12	9	17	13
140079	♂ ad.	Santa Cruz I., Calif.	July 13, 1892.	69.5	62.5	12	8.5	18	12.5
140080	♂ ad.	" " "	July 16, 1892.	69.5	64	11	8.5	17.5	13
Average . . . . .				68.2	61.4	11.8	8.8	17.7	12.6

<sup>1</sup> Manual of North American Birds, 1887, 340.

The present new species is here described through the kindness of Dr. C. Hart Merriam. The writer is also indebted to Dr. J. A. Allen for the use of material in the American Museum of Natural History; to Mr. Robert Ridgway for a similar courtesy with regard to the National collection; and to Mr. William Brewster for the loan of specimens of *Empidonax cineritius*.

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A NOTEWORTHY PLUMAGE OBSERVED IN THE  
AMERICAN EIDER DRAKE (*SOMATERIA*  
*DRESSERI*).

BY ARTHUR H. NORTON.

IN THE ornithological literature there has appeared from time to time, notes reporting the occurrence of the Pacific Eider drake in Atlantic districts of North America. These reports have been based on Eiders having a black V-shaped figure on the throat, a character commonly used, in connection with a white mantle, as diagnostic of *Somateria v-nigra*.

Such records have been questioned, but apparently a final decision has been deferred. Therefore the belief is entertained that a description of certain specimens of *Somateria dresseri*, taken on the east coast of the United States, is of sufficient interest to warrant its appearance here.

The present data clearly show that the black lancet is a character of frequent occurrence in the young drakes of *S. dresseri*; and there are strong reasons for the belief that it occurs in *S. mollissima borealis*. (See Hagerup, Bds. of Greenland, p. 42.)

During the winter of 1891, I received in the flesh, from Penobscot Bay, Me., a specimen of *S. dresseri*, showing marks of immaturity and having a distinct dusky or black lancet on the throat. It being unique in my experience, I wrote to the collector to send any other specimens having black on the throat, with the

result of receiving another very similar to it, and two adult drakes with black spots on the throat, located at the position of the junction of the two lines which form the lancet or V when present.

On questioning several collectors who live on the Maine coast, I was assured that they had quite often seen such marks in young drakes. Upon the investigation of a large series of these drakes in all stages of plumage, it was found that this feature is of irregular appearance, or, what is perhaps best understood, as an occasional reversion to the characters of a progenitor from which it sprang, in common with *v-nigra*.

It may be stated of the birds having the black figure, that, aside from the presence of that mark, their only departures from the typical adult male of their species, are fully shown to be coincident with stages of immaturity, and that they show nothing that can be considered as of a hybridic nature.

*Description of Specimens having Black Marks on Throat.*

No. 342. Coll. A. H. N.; Penobscot Bay, Me., winter, 1891. *Somateria dresseri*, male, nearly mature. Differing from adult male in having a few dusky tipped lesser wing-coverts; dusky tips to falcate tertials; frontal processes but .9 mm. wide near apex. Differing from the normal drake in having a dusky V or lancet on the throat, 46 mm. long. This specimen is matched in a normal young drake preserved in the same collection.

No. 439. Coll. A. H. N.; Penobscot Bay, Me., Dec., 1893. *S. dresseri*, male, nearly mature. Similar to the last, except in having more dusky tipped lesser coverts, falcate tertials tipped with a deeper shade of dusky, and frontal process 12 mm. wide. It differs from the normal drake in having a dusky lancet .38 mm. long, on the throat.

No. 340. Coll. A. H. N.; Penobscot Bay, Me., Mar. 20, 1891. *S. dresseri*, male, perfectly mature. No dusky in white of the wing; frontal process 14 mm. wide near apex. Differs from normal drakes in the presence of a dusky spot, 10 mm. long, on the throat.

No. 341. Coll. A. H. N.; Penobscot Bay, Me., winter, 1891. *S. dresseri*, adult male in high (winter) plumage. Frontal processes 14½ mm. wide near apex. Normal except in the presence of a black spot 13 mm. long at the position of the apex of the lancet.



## THE SUMMER HOME OF BACHMAN'S WARBLER NO LONGER UNKNOWN.

A COMMON BREEDER IN THE ST. FRANCIS RIVER REGION OF SOUTH-  
EASTERN MISSOURI AND NORTHEASTERN ARKANSAS.

BY O. WIDMANN.

THE first intimation of the breeding of Bachman's Warbler in the St. Francis region was had last year, when on May 7 and May 9 singing males were taken (*Auk*, XIII, 264). At that time no attempt was made to find the nest, though the condition of the testes showed that procreation was either going on, or not far distant.

May 8, 1897, I visited the same place again with the intention of settling the question, if possible. I had no trouble in finding several singing males on the day of my arrival at Kolb Island, Dunklin Co., Mo., on the Paragould and Southeastern railroad, 10 miles east of Paragould, Greene Co., Ark. An old male with deep black throat patch, extending over the breast and almost reaching to the bill, was evidently laboring under a severe spell of excitement and rattled off its little ditty with hardly any pauses at all. When singing he raised his head slightly, opened his bill as wide as he could, shook his wings violently, and his whole frame quivered as if in great ecstasy.

Next morning I visited him again and found him already in song at 5 A. M. In order to become perfectly acquainted with his song, to watch his movements, to see his mate, and possibly to get a clew where to look for the nest, I remained with him nearly the whole day, that is, from 5 to 7 and 8 to 12 A. M. and 3 to 5 P. M., when a heavy rainstorm came up. During these eight hours the bird kept singing nearly all the time at the rate of ten times a minute with the regularity of clockwork, and its sharp, rattling notes reminded me strongly of an alarm-clock. In this regard it recalls one of the performances of *Parula*, whose rattle is of the same length and quality, except that it has a certain rise at the end, by which it is easily distinguished. To my ear the Bachman's song comes nearest to that of the Worm-eating Warbler,

which is fortunately not found in swampland, but the Chipping Sparrow is, and, if the presence of the Bachman's Warbler is not suspected, it is indeed possible to mistake its song for a shrill variety of the Chippy's well-known ditty.

From a ten days' observation of the Bachman's Warbler, May 8 to 17 inclusive, it appears that the bird is very easily overlooked, even in a region where it is common. Its small size, its protective coloration, and its quiet ways combine to make it next to invisible among the heavy foliage of its habitat. The singing period is probably of short duration. Visits to neighboring islands, on both the Missouri and Arkansas sides, revealed the presence of a number of singing males, some with large, others with small and pale, throat patches, the former undoubtedly the older, the latter the younger individuals. On going over the same grounds repeatedly it was noticed that the intensity of their singing mood changed greatly; the old males, that were in a frenzy at the time of my arrival, sobered down, while the pale throats became gradually conspicuous and excited songsters. The time of nest building is probably the period of constant song, but after the eggs are deposited the desire for singing becomes so capricious that the locating and census-taking of the Bachman population is a time-consuming task.

Even if in song it takes minutes to find the bird, though he is generally seated on a dry or thinly-leaved branch at a height of twenty to forty feet from the ground. The reason why it is so difficult to locate him is his habit of pouring out his song into different directions, now to the right, then to the left, even turning entirely around on his perch. When he leaves, he is liable to fly quite a distance, far enough to get lost out of sight for the moment, and in the wildness of his home it takes several minutes to follow him over fallen trees and around impenetrable thickets or pools of water.

In spite of my careful watch for eight hours on the 9th, no clew to the location of the nest was had; the female was seen but twice and for seconds only, when the male darted down upon her, from his perch in the tree to the brambles below, where he caught hold of her, and a short squabble took place. This I took for a sign that she was sitting on eggs, for males often attack their mates

when they leave the nest. As was afterwards found, these attacks occurred far from the nest and could therefore not only give no clue, but were rather misleading. The trees, which the singing bird frequented, were scattered over an area of two acres, and to look over two acres of blackberry brambles among a medley of half-decayed and lately-felled treetops, lying in pools of water, everything dripping wet with dew in the forenoon, and steaming under a broiling sun in the afternoon, is no pleasant job. At first it seemed easy enough to find the nests after locating the males, but this proved to be a mistake.

Day after day I watched some of the males and searched the ground, but in vain. At last, on the morning of the 13th, I saw the female of No. 1, slip down into a bush with a dry grassblade in the bill. Now it was comparatively easy to find the nest, but I was surprised to see it almost ready to receive the eggs and, without doubt, built during my presence on the grounds the last few days. Though many hours had been spent within a few rods of the nest the female was only seen once in the trees which the male frequented, when she was feeding for a few moments, picking small larvæ from the underside of the leaves of *Ostrya*, hanging titmouse-like at the edge of the leaf itself. When in the act of reaching overhead, the gray throat patch appeared with great distinctness. At 9 A. M. on the 14th, she was sitting on the nest and, when I returned an hour later, the first egg had been laid, an entirely white egg which contrasted strongly with the deep black rootlet-lining of the nest. On the next day, the 15th, the second egg was laid, and on the 16th, the third. She was still sitting on the nest in the afternoon and probably began brooding as soon as the third egg was laid. On the forenoon of the 17th, she was still sitting on three eggs, and when I found her again on the nest in the afternoon I considered the set of three eggs complete. At my approach she would not leave the nest until I could almost lay my hand upon her, when she quietly slipped out and disappeared behind the brambles. Only after she had begun brooding was she heard to complain with a very soft, hardly audible *tsip*. The cup of the nest being deep, only the head of the sitting bird can be seen, but her yellow face is quite characteristic. It consists of a yellow frontlet, set off by a narrow

margin of black, a yellow chin and yellow orbital region, in which the dark eye appears in sharp contour.

All three eggs are perfectly white and unspotted, and resemble in color, shape and size those of the Short-billed Marsh Wren. The nest was made of leaves and grass blades, lined with a peculiar black rootlet; it was tied very slightly to a vertical blackberry vine of fresh growth and rested lightly on another, which crossed the former at a nearly right angle. From above it was entirely hidden by branchlets of latest growth, and the hand could not have been inserted without at first cutting several vines, overlying it in different directions. It was two feet from the ground, and to reach the place it was necessary to go through pools of water and over heaps of fallen trees and brush. Such sheltered places are probably chosen to avoid the danger of being trampled down by hogs and cattle, roving in these woods.

There is little danger from egg-collectors; even the natives are seldom seen entering these thickets after the first of May, not so much for fear of thorns and mosquitos or poisonous snakes, but for fear of that greatest curse of these beautiful forests, the ticks, of which they distinguish three kinds: the ordinary wood tick, a comparatively harmless creature, as it is easily picked off before great damage is done; the seed tick, which is already more to be dreaded because of its smaller size; but the worst of all is the jigger or chigger, which is so small as to be hardly seen with the naked eye until it has entered the skin where it causes restless nights and suffering for weeks. This worthy trio forms a society for the protection of birds, more powerful than the best state laws.

There is probably no region in the whole United States so rich in bird life as those islands, not only in the large number of species, but, still more, in the number of individuals. Some of the choicest beauties, such as Prothonotary, Hooded and Kentucky Warblers are not only present, but we hear or see them at almost every step. On a sultry day in May the music from so many throats of summer sojourners is grand and impressive, but it is made still more imposing and perplexing by the musical efforts of twenty and odd different species of transients, and by the noisy fledgelings of the first brood of permanent residents.

To a practiced ear this is a rich harvest, and there is probably no place where the rarer transients are so commonly met with and so often heard to sing as here in this wild gum-boot region of southeast Missouri, where the rivers have no banks, and a rise of a few feet inundates thousands of square miles. Every spring at least one half of the area is under water, but even the highest floods, among them that of 1897, cannot submerge the entire area, though it may lack only a few feet; so large is the expanse of lowland, over which the water has to spread. Kolb Island with its 140 acres had less than 40 acres of dry land at the time of my visit, though the water had already gone down over a foot and a half from its highest stage in April.

The whole St. Francis basin is a network of sloughs, in reality only arms of the St. Francis River; they have very narrow channels free from treegrowth, but overgrown with wild rice (*Zizania miliacea*), different kinds of smartweed, mostly the large southern kind, *Polygonum densiflorum*, and the channel itself is closed up in summer by a dense growth of lotus (*Nelumbium*). This narrow, treeless, channel region merges into the tupelo and taxodium belt, the region of regular yearly overflow of several months' duration, in some years hardly getting dry at all.

Then comes the region of irregular overflow of shorter duration, grown with sweetgum, blackgum, water and willow oaks, ashes, cottonwood, hackberry and, on the higher levels, white and cow oaks, pin oak, red oak, walnuts and hickories, elms and two scores of others, among them the ornamental catalpa and tulip trees and, last but not least, the mulberry. From the ornithologist's standpoint this latter is a valuable constituent of the sylvia. Its fruit begins to ripen early in May and is a great attraction for a number of birds throughout the month. I am inclined to think that the mulberry has something to do with the melodious moods and late loitering of many northbound wanderers, especially the Alice Thrushes, some of which were seen lingering into June.

[Description of the nest and eggs of *Bachman's Warbler* (*Helminthophila bachmanii*).—Mr. Widmann having requested me to describe the nest and eggs referred to in the preceding article I take pleasure in doing so.



Nest a somewhat compressed compact mass composed externally of dried weed- and grass-stalks and dead leaves, many of the latter partially skeletonized; internally composed of rather fine weed- and grass-stalks, lined with black fibres, apparently dead threads of the black pendant lichens (*Ramalina*, species?) which hang in beard-like tufts from button-bushes (*Cephalanthus*) and other shrubs growing in wetter portions of the western bottom-lands. The height of the nest is about  $3\frac{1}{2}$  inches; its greatest breadth is about 4 inches, its width in the opposite direction being about 3 inches. The cavity is about  $1\frac{1}{2}$  inches deep and  $1\frac{1}{2} \times 2$  inches wide.

The eggs are of very regular ovate form, and entirely pure white in color, their measurements being as follows:—No. 1,  $0.63 \times 0.48$ ; No. 2,  $0.64 \times 0.49$ ; No. 3,  $0.63 \times 0.49$ . — ROBERT RIDGWAY.]

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## PRELIMINARY DESCRIPTIONS OF NEW BIRDS FROM MEXICO AND ARIZONA.

BY FRANK M. CHAPMAN.

THE material on which the following descriptions are based was in part secured by the writer during April, 1897. The relationships of the forms here described will be discussed more fully in a subsequent paper. Thanks are due Dr. C. W. Richmond, Assistant Curator of the Department of Birds, U. S. National Museum, for the loan of specimens of *Coccothraustes* and *Spinus*.

### *Contopus pertinax pallidiventris*, subsp. nov.

*Chars. subsp.* — Similar to *Contopus pertinax* Cab. but with the under parts, especially the centre of the abdomen, whiter, the upper parts paler, the crown of practically the same color as the back. Wing, 4.48; tail, 3.51; tar., 62; ex. cul., 72.

*Type.* — Am. Mus. Nat. Hist., No. 29007, ♂ ad., Pima County, Arizona. Collected by W. E. D. Scott, April 22, 1885.

Cabanis's type of *pertinax* was from 'Jalapa,' but it is doubtful if the species breeds in the immediate vicinity of that city.



However, specimens taken at Jalapa agree with others taken at Las Vigas, where they were evidently preparing to breed.

***Coccothraustes vespertinus mexicanus*, subsp. nov.**

*Hesperiphona vespertina* var. *montana* B. B. & R., N. A. Bds., I, 1875, p. 449 (in part).

*Coccothraustes vespertina montana* MEARNs, Auk, VII, 1890, p. 246 (in part).

*Char. subsp.*—Slightly smaller than *Coccothraustes vespertinus montanus*, the male with the yellow frontal band narrower, the female with the under parts more buffy. Wing, 4.50; tail, 2.64; tar., .75; ex. cul., .75 in.

*Type.*—Am. Mus. Nat. Hist., No. 68480, ♂ ad., Las Vigas, Vera Cruz, Mexico. Alt., 8000 feet. Collected by Mateo Trujillo and Frank M. Chapman, April 24, 1897.

The characters distinguishing this race have in part been commented on by previous writers<sup>1</sup> who, however, deemed them insufficient to warrant its recognition, but on comparing four adult males and four adult females from Mexico with over sixty specimens of *Coccothraustes vespertinus* and *C. v. montanus*, I have no hesitancy in describing the Mexican bird as a new form.

A young male but a few days from the nest, being fed by an adult male, was taken at Las Vigas, April 21, where the bird doubtless breeds, therefore, early in March.

***Spinus pinus macroptera* (Du Bus.).**

"*Carduelis macroptera* DUBUS, Esq. Orn. t. 23;" BONAP. Consp. Av. I, 1850, p. 515.

*Char. subsp.*—Similar to *spinus pinus* but larger, less heavily streaked below, and with yellow of wings and tail of greater extent. Wing, 3.12; tail, 1.98; tar., .52; ex. cul., .42 in.

*Type.*—Am. Mus. Nat. Hist., No. 68481, ♂ ad., Las Vigas, Vera Cruz, Mexico. Alt., 8000 feet, collected by Frank M. Chapman, April 20, 1897.

I have not seen Du Bus's description but the description by Bonaparte is sufficient to fix the name of this well-marked race. At the time of my visit males were in full song and evidently mating.

<sup>1</sup> Cf. Baird, Brewer and Ridgway and Mearns, *l. c.*

## GENERAL NOTES.

**The proper Generic Name of the Loons.**—Formerly, and still to a large extent, the Loons were referred to the genus *Colymbus* Linn., 1758. Brisson, however, in 1760, restricted *Colymbus* to the Grebes (cf. Stejneger, Proc. U. S. Nat. Mus. V, 1882, 42), in which sense it is used in the A. O. U. Check-List, where *Urinator* Cuvier, 1799, is employed for the Loons. There is, however, a perfectly tenable earlier name for the Loons in *Gavia* Forster, 1788. Why it has been so long overlooked seems unaccountable, as it is so well defined that its pertinency is beyond question.

Forster (Enchirid. Hist. Nat. 1788, 38) clearly distinguished the Grebes as *Colymbus*, as follows: "*rostrum* subulatum, compressum. *Pedes* lobati, *Tibiae* postice carinato-serratae." Next follows his genus *Uria*, for the Auks, and then *Gavia*, characterized as follows: "*rostrum* subulatum, compressum. *Pedes* palmati, tetradactyli." This in itself is unequivocally diagnostic, and taken in connection with the groups that precede and follow *Gavia*, the conclusion that *Gavia* is here proposed for the Loons is irresistible.

The main synonymy of the genus *Gavia* is as follows:

*Colymbus* LINN. Syst. Nat. ed. 10, I, 1758, 135 (in part).

*Gavia* FORSTER, Enchirid. Hist. Nat. 1788, 38.

*Urinator* CUVIER, Anat. Comp. I, 1799, Tabl. ii.

The Loons of the A. O. U. Check-List will therefore stand as follows:

7. *Gavia imber* (GUNN.).

8. *Gavia adamsii* (GRAY).

9. *Gavia arctica* (LINN.).

10. *Gavia pacifica* (LAWR.).

11. *Gavia lumme* (GUNN.).

It also becomes necessary to change the name of the family from *Urinatoridae* to *GAVIIDÆ*.—J. A. ALLEN, *Am. Mus. Nat. Hist., New York City*.

***Uria lomvia*, an Addition to the Avifauna Columbiana.**—The recent erratic movement of this species extended also to the Potomac at this point, and adds another family to our list. Six specimens, all birds of the season were obtained in this locality, as follows:

No. 1. Dec. 14, 1896. The first seen at the market.

" 2. " 20, " Occoquan Creek, Potomac River.

" 3. " 22, " ♂, Potomac River, between Washington and Alexandria.

No. 4. Dec. 27, 1896. ♀, Potomac River, between Washington and Alexandria.

No. 5. Dec. 28, 1896. ♀, Potomac River, between Washington and Alexandria.

No. 6. Jan. 1, 1897. ♂, Potomac River, between Washington and Alexandria.

All but the second were purchased from various stands on Virginia Ave., N. W., between 9th and 10th Sts., and were found on careful inquiry to have been killed by gunners at points between Washington and Alexandria. The second was killed by a gunner, who gave the bird to George Ayers of Alexandria, Va., who sent it to the Smithsonian Institution, where it now forms No. 154200 of the U. S. N. M. Collection. It was said to have been the only one seen. Nos. 3, 4, and 6 form Nos. 2284, 2286 and 2289 of my collection, and the 5th is in the collection of Mr. William Palmer of this place. — PAUL BARTSCH, *Smithsonian Institution, Washington, D. C.*

**Note on *Pagophila alba*.** — The attempt made (Pr. U. S. Nat. Mus. V, June, 1882, p. 39) to supersede the established generic name *Pagophila* by the derelict term "*Gavia*" has been temporarily effectual through the adoption of *Gavia* by the A. O. U. on the strength of Dr. Stejneger's misrepresentation, but is not likely to prove more successful than some other blunders that could be named. *Gavia* is traceable back to Pliny, as equivalent to Greek *λαῖος*, Lat. *larus*, a gull; and is said to be still an Italian word for 'gull.' Passing by its use by Moehring in 1752 as equivalent to *Larus*, and its employ by Brisson in 1760 as a term in the polynomial designations of various Gulls—for these instances do not affect the nomenclatural point I raise—we come to *Gavia*, Forster, Enchirid. Nat. Hist. 1788, p. 38. This is said by Newton (Dict., p. 310) to be a genus of water birds, with no type named; but according to this high authority, Forster's "diagnosis indicates that he meant what is most commonly called *Colymbus*." There are various other later applications of *Gavia* as a generic name of certain Gulls and Plovers, notably one by Boie, Isis, 1822, p. 563, to a genus containing *Larus eburneus* and *L. rissa*; but Boie's employ of *Gavia* in this connection is voided by our rules in consequence of Forster's prior use of *Gavia* for a genus of Divers. Waiving other objections to *Gavia* which Mr. Howard Saunders has indicated (Cat. B. Brit. Mus. XXV, 1896, p. 301) and Professor Newton has specified (*l. c.*), we see that Forster's *Gavia*, 1788, debars Boie's *Gavia*, 1822. *Pagophila* Kaup, 1829, is thus in order as the tenable generic name of the Ivory Gull, *P. alba*. It is to be hoped that the next edition of the Check-List will correct the error into which the A. O. U. has been misled by relying upon unreliable evidence. — ELLIOTT COUES, *Washington, D. C.*

**Arrival of Terns at Penikese Island in 1897.** — Penikese Island, May 6, 1897. Up to last night no Terns had been noted in this locality. Early this morning they appeared in quite a considerable body. They all departed the next day, returning in a day or two; their numbers being greatly augmented. The first egg was observed on the afternoon of May 23. No more were discovered until the 25th, when four were noted. On May 29, 30, 31, quite a number of nests with one egg each, several with

two eggs each, and four with three eggs each were observed. The above is the earliest date of arrival of the birds of which I have any knowledge. This island has now been posted, and the Terns are likely to have better protection than ever before. — GEORGE H. MACKAY, *Nantucket, Mass.*

**Onychoprion, not Haliplana.** — As I have remarked before (Pr. Philada. Acad., 1862, p. 555), "Wagler's *Onychoprion* is based upon the *S[terna]*, *serrata* of Forster; while his *Haliplana* has as type *S. fuliginosa*, Gm. The former of these species . . . is in all probability identical with *fuliginosa*, and is at all events strictly congeneric with it. This being the case, perhaps *Onychoprion* ought to be employed for the genus; as it is instituted several pages in advance of *Haliplana*" in *Isis*, 1832. I now find the case to be exactly as I surmised 35 years ago. The synonymy of the Sooty Tern section of *Sterna*, so far as Wagler is concerned, is: *Onychoprion*, *Isis*, 1832, p. 277, type *serrata* Forst., = *fuliginosa*; *Planetis*, *Isis*, 1832, p. 1222, type *guttata* Forst., = *fuliginosa*; *Haliplana*, *Isis*, 1832, p. 1224, type *fuliginosa*. All three names are thus based on one species, and all bear the same ostensible date; but of actual priority of *Onychoprion* there is no question, as reference to the dates of parts of *Isis* for 1832 shows.

The specific name of another bird of the subgenus *Onychoprion* must be changed from the misspelling "*anæthetus*" of our Check-List, for we have absurdly adopted a mere misprint, besides failing to observe grammatical gender. Our rules allow us the privilege of correcting a typographical error, as dropping of the *s* in this case certainly is; and though *Sterna* was once of common gender, it is feminine now, both by analogy of form and by common consent. The full form of the word would be *anæsthetica*, as in my 'Key,' etc.; but lest I be accused of wanton 'purism,' I will compound that felony by accepting *anæsthesia*, (Gr. ἀναισθησία, stolid, unfeeling, apathetic).

Our mistake regarding *Onychoprion* is counterbalanced by a reverse error. Having ignored actual priority in this case, we turn around and bestow a fictitious priority upon *Sterna tschegrava* Lepechin, to avoid using the established name *S. caspia*. These two names are ostensibly of same date, 1770, in same part of same volume of the publication in which they both appear; and there is no evidence that the 82 pages concerned (p. 500 to p. 582) make a difference of a day or an hour in actual date of publication. Why then drop *caspia* for *tschegrava*, except to show how great we can be in little things? I shall continue to use *caspia*; and so will all other ornithologists, when the flurry and hurry and worry of our Check-List is over. — ELLIOTT COUES, *Washington, D. C.*

**Remarks on certain Procellariidæ.** — On reviewing these objects of my early solicitude (1864-66), chiefly in the light of Salvin's recent admirable Monograph, I observe that a number of classificatory and nomenclatural changes are required in the A. O. U. List, besides those which the Committee adopted in 'The Auk' of last January, or then deferred.

1. We have done well in separating *Diomedeidæ*<sup>1</sup> as a family apart from *Procellariidæ*, and also in declining to raise *Oceanitinæ* to full family rank. While we may not follow Mr. Salvin to the length of recognizing *Puffinidæ* as a family (though he certainly gives some good characters, cranial and other), it is quite true that we must adopt several more subfamilies than now appear on our List:

- a. *FULMARINÆ*. Equivalent to the *Fulmaræ* and *Prionæ* of my early papers; including among our genera *Daption*. I failed to recognize the real character of this group, which is the lamel-lirostral bill, seen at its best in the exotic genus *Prion*. The lamellæ are obsolete or hardly evident in the true *Fulmars*, but easily seen in *Daption*, a form which connects the extremes perfectly.
- b. *PUFFININÆ*. Equivalent to the *Puffinæ* and *Cestrelatæ* of my early papers; which two groups come sufficiently near together. None of these birds have any lamellation of the bill, but all share basipterygoids with the *Fulmarinæ*.
- c. *PROCELLARIINÆ*. Restricted to the short-legged "Stormy" Petrels.
- d. *OCEANITINÆ*. The remarkably grallatorial "Stormy" Petrels, as they stand at present in the A. O. U. List.

2. *Priocella* and *Priofinus* are perfectly good genera, the former of *Fulmarinæ*, the latter of *Puffininae*. They have stood as such in the 'Key' since 1884, and should never have been degraded. *Priocella*, in fact, is so different from *Fulmarus*, with which the A. O. U. combines it, that Mr. Salvin puts it in the other subfamily.

3. *Cymodroma* should not have replaced *Fregetta* — a word which is sufficiently different from *Fregata*, according to our orthographic (or rather cæcographic) rules. Our canon on the subject does not permit us to rule out names which are differently spelled, if more than grammatical gender of terminal inflection be involved: witness *Leptotila*, etc.

4. *Puffinus stricklandi*. I think it very likely that, as held by Mr. Salvin, all the large Sooty Shearwaters must be united under *P. griseus*. But if we propose to separate the Atlantic bird from that of the Pacific, its name is *P. fuliginosus*. For, though there are several cases of prior use of the term *Procellaria fuliginosa*, for various birds of different genera, I find no use of *Puffinus fuliginosus* for any species prior to Strickland, 1832; and certainly preoccupation of a specific name in one genus never debars its use in another genus. The earliest use of *Procellaria fuliginosa* appears to be by Gmelin, 1788, for the Sooty Petrel of Latham, now *Oceanodroma fuliginosa*; but this in no wise affects the standing of *Puffinus fuliginosus*. — ELLIOTT COUES, *Washington, D. C.*

<sup>1</sup> Still more distinct from other *Tubinares* are the exotic *Pelecanoididæ*, the full family rank of which I indicated in *Pr. Phila. Acad.*, 1868, p. 54; and I should not have degraded this group in later writings.



**Rectrices of Cormorants.**—*Phalacrocorax carbo* has 14 rectrices, but none of our other species of this genus is known to have more than 12. This is the primary basis of the analysis which has stood in the 'Key' since 1872. I was therefore surprised to find Ridgway's 'Manual' crediting both *P. penicillatus* and *P. perspicillatus* with 14. On conferring with him about it, *P. penicillatus* was found to have no more than 12, as I had always supposed. The only statement regarding *P. perspicillatus* that I know of—being Brandt's, as first published in Pr. U. S. Nat. Mus., XII, 1889, p. 86—gives the tail as "e pennis 12 composita."—ELLIOTT COUES, *Washington, D. C.*

**Concordance of Merganser americanus.**—I am sorry to point out an extraordinary oversight in the 2d ed. of the A. O. U. Check-List, where the concordance of the common American Merganser is given as "B—, C—, R—, C—," as if neither Prof. Baird, nor Mr. Ridgway, nor myself had given this bird in our respective Lists. The dashes should be replaced by figures, as B 611, C 521, R 636, C 743, which so stand, correctly, in the 1st ed. of the A. O. U. List.—ELLIOTT COUES, *Washington, D. C.*

**The Scarlet Ibis in Colorado.**—On page 60 of my 'Birds of Colorado' it is stated that but four instances are known of the occurrence in the United States of the Scarlet Ibis (*Guara rubra*). To this short list is now to be added a fifth and most remarkable record. A flock of six of these magnificent birds was seen April 23, 1897 on the Arkansas River near Rocky Ford, Colorado. Three specimens were secured, a male and two females and have been mounted by a local taxidermist.

In this connection it will be well to call attention to a mis-print under the notes on this species in 'Birds of Colorado.' The specimen noted from "Texas" should be "New Mexico," the reference being to the record of Dr. Coues of a fragment of one seen at Los Pinos. Dr. Coues has recently informed the present writer that there can be no question of the correctness of this record.—W. W. COOKE, *Fort Collins, Colorado.*

**Little Blue Heron in New Hampshire.**—I have recently had a Little Blue Heron (*Ardea cærulea*), in perfect plumage, with maroon neck, brought in, killed in Amherst, New Hampshire, April 28, (1897). Is it not rare to take a bird of this species in New Hampshire?—JAS. P. MELZER, *Milford, N. H.*

**Bob-white in Northwestern New York.**—Several Quail (*Colinus virginianus*) have been reported from different parts of the Counties of Oneida and Lewis the past winter. It is very seldom they are seen in this locality. The winter has not been so severe as usual.—W. S. JOHNSON, *Boonville, N. Y.*

**Additional Records of the Passenger Pigeon (*Ectopistes migratorius*).**—Most of the notes on the Passenger Pigeon recorded in the past year



have referred to single birds or pairs. It is with much pleasure that I can now call attention to a flock of some fifty, observed in southern Missouri. I am not only greatly indebted to Mr. Chas. U. Holden, Jr., for this interesting information, but for the present of a beautiful pair which he sent me in the flesh, he having shot them as they flew rapidly overhead. Mr. Holden was, at the time, hunting Quail in Altie, Oregon Co., Missouri. The residents of this hamlet had not seen any Pigeons there before in some years.

Simon Pokagon, Chief of the remaining Pottawattamie tribe, and probably the best posted man on the Wild Pigeon in Michigan, writes me under date of Oct. 16, 1896: "I am creditably informed that there was a small nesting of Pigeons last spring not far from the headwaters of the Au Sable River in Michigan." Mr. Chase S. Osborn, State Game and Fish Warden of Michigan, under date, Sault Ste. Marie, March 2, 1897, writes: "Passenger Pigeons are now very rare indeed in Michigan, but some have been seen in the eastern parts of Chippewa County, in the Upper Peninsula, every year. As many as a dozen or more were seen in this section in one flock last year, and I have reason to believe that they breed here in a small way. One came into this city last summer and attracted a great deal of attention by flying and circling through the air with the tame Pigeons. I have a bill in the legislature of Michigan closing the season for killing Wild Pigeons for ten years." — RUTHVEN DEANE, *Chicago, Ill.*

**Aquila chrysaëtos in Central Minnesota.**—It affords me great pleasure to record the capture of this noble bird in this State.

On March 19, 1897, a hunter brought me a beautiful perfectly adult female shot twelve miles east of here. It was quite fat, evidently getting enough to live on during the long winter and deep snow. The stomach contained several ounces of the remains of a common white rabbit. The following are the measurements. Length, 37.00; extent, 86.00; wing, 33.00; tail, 14.50; tarsus and middle toe, 9.00. Weight, 12 lbs. 9 oz. — ALBERT LANO, *Aitkin, Minn.*

**Breeding of the Goshawk in Pennsylvania.**—In Dr. Warren's Report of the Birds of Pennsylvania (1890) he records the Goshawk (*Accipiter atricapillus*) as a breeder in the State, mainly on the authority of Mr. Otto Behr of Lopez, Sullivan County. Thanks to the same gentleman, I am able to place on record some additional facts relative to the breeding of the species in Pennsylvania.

On April 30, 1897, Mr. Behr and his brother secured a nest and two eggs of the Goshawk about five miles from Lopez, which they kindly presented to the Academy of Natural Sciences of Philadelphia. Since that time they have discovered another nest with eggs near the same place.

Mr. Behr states in addition: "We have found eight nests of the Goshawk in the last ten years, and all but one of these were built in

beech trees; . . . most of the nests contained two young each. We found three nests in different years that contained only one bird each, but never found the eggs until this year."

During the past winter Goshawks have occurred in unusual numbers in southern Pennsylvania and New Jersey, where they are generally very rare. — WITMER STONE, *Academy of Natural Sciences, Philadelphia, Pa.*

**Peculiar Nest of the Great Horned Owl.**—While returning from a short walk in the woods during a recent afternoon (March 14), I found a nest of *Bubo virginianus* which was quite remarkable. I had left the woodland and was crossing a meadow; in this there stood perhaps a half dozen elms and maples, none of them over six or eight inches in diameter at the base, the nearest timberland being three hundred yards away, across a creek. In one of the largest maples there was an old nest of the Crow, only twenty-four feet from the ground; this was occupied by a pair of Owls and one of the parent birds was upon the nest. Repeated heavy blows upon the trunk did not effect her flight; she remained until I shook a sapling which brushed the nest with its tips. Ascending, I found three eggs; in and about the nest were sixteen field mice, a hind leg of a rabbit and a wing of a Downy Woodpecker. There was also in a tree at no great distance the half-eaten body of a Pinnated Grouse. Upon preparation of the eggs I found them addled; incubation, which was equal in all, had advanced for three or five days, when the process had stopped, probably through the eggs becoming chilled. Evidently the bird had continued to set upon the eggs for a week thereafter. — FRANK H. SHOEMAKER, *Hampton, Iowa.*

**Disgorgement among Song birds.**—Here in the cultivated parts of Southern California, there have been planted very extensively for shade and ornament, the beautiful ever-green pepper-trees. These trees bear a red berry in pendant clusters which mature on the trees throughout the whole year. Large flocks of western Robins and Cedar-birds are attracted into town during the winter months, and feed largely on these pepper-berries. The trees are constantly full of the birds, the habits of which I have had ample opportunity of observing.

The pepper-berries are somewhat smaller than sweet-pea seeds, and of a spherical shape. They are composed of three parts; a thin dry paper-like outer hull; a solid central part, and on the outside of the latter but not touching the external husk, a sticky viscid coating. The central kernel is very hard, and moreover when chewed has a most penetrating disagreeable taste which does not leave the mouth for a long time. When held in the mouth without being touched by the teeth, however, the viscid coat is dissolved in the saliva, and proves to be very sweet and agreeable to the taste. This sweet portion is the nutritive part of the fruit which is sought by the birds.

The birds rapidly swallow these berries in large numbers, including the hulls, which are easily crushed, until the stomach is crammed. They

then repair to some convenient roost, and there remain for ten to fifteen minutes. The juices of the stomach dissolve the sweet coating of the berry and then the kernels, together with the broken husks, are *disgorged*. The ground under a favorite roosting place of the Cedar-birds or Robins is frequently nearly covered with these disgorged kernels and one can see the seeds rattle down as each bird gets rid of two or three at a time.

In my back yard there is a shed under some high eucalyptus trees which appear to be the common rendezvous of several flocks of these birds which feed in the neighborhood. The pattering of the pepper seeds as they fall on the shed-roof is incessant all day long, and the ground is brown with them. I have often watched Robins and Mockingbirds at close range, and I noted that during the process of disgorgement the birds for a moment appeared to be in distress, and after two or three spasmodic coughs and a side-wise jerk of the head, out would come two or three of the kernels. All the birds which eat the pepper-berries have the same habit, and with the Mockingbirds, Western Robins, Cedar-birds and Phainopeplas, the peppers seem to be a very important food-supply. Besides these birds, I have seen the Townsend's Solitaire and Varied Thrush in the act of disgorging.

It is only within the last 12 or 15 years that the pepper-trees have been so abundantly planted in Southern California, and the fact that the birds in so short a time have acquired such an unusual habit, to conform with a new kind of food, seems to me very significant. Possibly this habit of disgorgement has been a common practice wherever the character of the food requires it, but it was new to me. Some one can probably throw more light on the subject.—JOSEPH GRINNELL, *Pasadena, Cal.*

**An Unusual Song of the Red-winged Blackbird.**—In the first week of May last, I happened on a company of Red-winged Blackbirds, in full play of their courting hour. The males among them were, of course, as tuneful and as actively engaged in the cutting of capers as is their wont, at such times.

But on this occasion it was more interesting to notice that the females, ordinarily so very demure, were showing themselves to be not a whit the less animated by the spirit of the play. And very amusing indeed it was to watch these comedians in sober brown, but in extemporized ruffs, puffs and puckers, pirouette, bow and posture, and thus quite out-do in airs and graces their black-coated gallants. Their shrill whistle, the meantime continually vied with, or replied to, the hoarse challenges of their admirers, while in noisy chattering, and in teasing notes, they were excessively voluble.

Whilst loitering thus entertained my ear had been attracted by repetitions of a strain which came from the dense foliage of a nearby pine. In meter it was the same as the *coke-al-lee-e-e* of the shoulder-strapped members of the company. It was, however, pitched in a higher key, wholly free from gutturals, nor did it contain any sound that could be

represented by any consonant in our alphabet. It was also perfectly smooth in execution and mellow, flute-like in tone. The French *u* if dwelt upon, with inflections and modulations, as uttered by a sweet voiced Parisienne might closely, I imagine, represent the sound. After a while this singer came from his concealment, and, poising on an outer spray, there sang for eight or ten minutes, before flitting off, to be again hidden by the neighboring foliage. — THOMAS PROCTOR, *Brooklyn, N. Y.*

**Spring Molt in *Spinus pinus*.** — In a paper published in the Proceedings of the Academy of Natural Science, Philadelphia, 1896, p. 141, I stated that so far as I could judge from available material the Pine Finch had no spring molt. A series of specimens taken at West Chester, Chester Co., Pa., in May, 1897, by Dr. T. H. Montgomery shows, however, that quite an extensive renewal of the feathers occurs at this season. It of course does not extend to the remiges and rectrices. As my former statement was liable to be misleading, I take this opportunity to correct it. — WITMER STONE, *Academy of Natural Sciences, Philadelphia, Pa.*

**An Earlier Name for *Ammodramus leconteii*.** — *Fringilla caudacuta* LATHAM (Index Orn. I, 1790, 459) is usually cited as a doubtful synonym of *F. passerina* WILSON, but reference to the description shows that Latham's bird is Leconte's Sparrow. The description, though brief, fits the latter bird very exactly, both as to coloration and dimensions, and the locality, interior of Georgia, is within the regular winter range of the species. Fortunately no change of specific name is, in this instance, necessary, the *Oriolus caudacutus* of Gmelin, described two years before, being a member of the same genus, even if it should be found desirable to recognize *Coturniculus* as a separate genus from *Ammodramus*; for *A. leconteii* is certainly more nearly related to *A. caudacutus* than to either *Coturniculus passerinus* or *C. henslowii*. — ROBERT RIDGWAY, *U. S. National Museum, Washington, D. C.*

**The Seaside Sparrow (*Ammodramus maritimus*) in Massachusetts.** — In a small private collection of mounted birds in Arlington, Mass., I find an adult Seaside Sparrow with the following history: shot by Mr. Eugene H. Freeman on the bank of the Neponset River, at high tide, about half way between Milton Lower Mills and Granite Bridge, on the Milton side of the river. Unfortunately the date of capture is not recorded; it was in the early autumn, however, something over twenty years ago, so Mr. Freeman tells me.

In most of the older lists of the birds of Massachusetts the Seaside Sparrow is said to be a common summer resident of the salt marshes along the coast. This opinion doubtless arose from confounding the Seaside Sparrow with the Sharp-tailed Sparrow (*Ammodramus caudacutus*). That such a confusion prevailed is shown by the fact that many of the old lists (*e. g.*, Emmons's 'Birds of Mass.,' Holder's 'Birds of Lynn,'

and Putnam's 'Birds of Essex Co.') exclude *A. caudacutus* altogether! Even Dr. Coues (Proc. Essex Inst., V, 1868, 282), by a lapsus corrected in 'New England Bird Life,' I, 251, recorded the Sharp-tails of Rye Beach, N. H., as Seaside Sparrows, and J. Matthew Jones ('Forest and Stream,' XII, 1879, 106) in his list of the birds of Nova Scotia included the Seaside Sparrow as an abundant summer resident of that Province, arriving there during the latter part of March! From what is now known concerning the breeding range of *A. maritimus*, we are warranted in suspecting that Brewer (Hist. N. A. Birds, I, 1874, 560), too, fell into a similar error in saying that a few pairs of Seaside Sparrows, "identified by Mr. Audubon," bred in the marshes of 'Stony Brook, near Boston, in 1836 and 1837.

However that may be, the eastern limit of the breeding range of the Seaside Sparrow, so far as now observed, is the western shore of Narragansett Bay, beyond which it occurs only as a very rare straggler. The first unquestionable Massachusetts specimen was killed at Nahant in August, 1877, by Geo. O. Welch, and recorded by Brewer (Bull. Nuttall Orn. Club, III, 1878, 48; Proc. Boston Soc. Nat. Hist., XIX, 1878, 260). This specimen (now in the collection of the Boston Society of Natural History, No. 221) is a young male with a sharply streaked breast; it was identified by Baird as a Seaside Sparrow "in the plumage regarded by Audubon as a distinct species, and called by him MacGillivray's Finch." Another Massachusetts specimen, an adult female shot by Dr. L. B. Bishop on Monomoy Island, Cape Cod, April 14, 1890, was recorded by J. C. Cahoon in 'The Auk,' VII, 1890, 289. — WALTER FAXON, *Museum of Comparative Zoölogy, Cambridge, Mass.*

**What is *Fringilla macgillivraii* Aud.?** — In 1835 Audubon (Orn. Biog., II, 1835, 285) described under the name *Fringilla macgillivraii* a dark-colored Seaside Finch, discovered by Bachman in the salt marshes of South Carolina. Figures of this bird, drawn at Charleston by Audubon's son, were announced as finished, but the plate did not reach London in time to be engraved and published till two years later (Birds of America, Vol. IV, 1837, Pl. CCCLV). In a subsequent volume of the 'Ornithological Biography' (IV, 1838, 394) Audubon extended the range of MacGillivray's Finch so as to include similar birds found on the coast of Louisiana and Texas.

In 1888 Mr. Allen (Auk, V, 1888, 284) described under the name *Ammodramus maritimus peninsulae* a small, dark race of the Seaside Sparrow from Tarpon Springs and Cedar Keys, on the western coast of Florida, at the same time identifying with this form a series of specimens from Grand Isle, La. In the following number of 'The Auk' (p. 426) Mr. Allen pronounced a bird from the coast of Georgia to be *A. m. peninsulae*, and in the second edition of the A. O. U. Check-List the distribution of this subspecies on the Atlantic coast embraces South Carolina, the type locality of *Fringilla macgillivraii*.



In 1896 Mr. Ridgway (Man. N. A. Birds, 2d ed., p. 602) separated the Louisiana Seaside Sparrows from *A. m. peninsulae* as a distinct race, whose habitat is given as "coast of Louisiana (and coast of Texas during migration)." For this race he appropriates, in a subspecific sense, Audubon's name *macgillivraii*,—an obvious wrong, since the original description of *Fringilla macgillivraii* was based exclusively on South Carolina specimens.

The dark-complexioned Seaside Sparrows from the coast of Georgia and South Carolina are certainly very like those found on the western coast of Florida. If, as implied in the range accorded to *A. m. peninsulae* by the A. O. U. Check-List, they are identical, and if MacGillivray's Finch is to be revived, then the name *macgillivraii* will have to supplant *peninsulae*. In any case, the Louisiana Seaside Sparrow, recognized as a valid subspecies in the Eighth Supplement to the A. O. U. Check-List, remains without a name.—WALTER FAXON, *Museum of Comparative Zoölogy, Cambridge, Mass.*

**The Seaside Sparrow (*Ammodramus maritimus*) at Middletown, R. I.**—I shot an adult male Seaside Sparrow on the Second Beach Marshes at Middletown, R. I., on May 31, 1897, therefore confirming Mr. Reginald Heber Howe, Jr.'s supposition that they breed there. (See Auk Vol. XIV, page 219.) This makes three birds of this species that I have taken on these marshes.—EDWARD STURTEVANT, *Boston, Mass.*

**Breeding of the Seaside Sparrow in Massachusetts.**—On July 17, 1896, I took a set of four partly incubated eggs of the Seaside Sparrow (*Ammodramus maritimus*), together with the female bird, at Westport, Mass. The nest was cleverly hidden within a tussock of the salt marsh.

The Seaside Sparrow is not rare as a summer resident in the Westport River marshes. It is, however, rather colonial, and confines itself closely in the breeding season to certain sections of the marshes.—J. A. FARLEY, *Newton, Mass.*

**Bachman's Sparrow in Virginia.**—On May 12, 1897, while collecting on a slope along the Blackwater Creek in West Lynchburg, Campbell County, Mr. John W. Daniels, Jr., of Lynchburg, collected two specimens of *Peucaea aestivalis bachmanii*, together with the nest and five eggs well advanced in incubation. He writes: "The nest was on the ground among the roots of a tuft of grass and well concealed by the numerous grass tops which overhung it. It was quite domed, with the entrance facing the southeast and was composed chiefly of grasses, strips of weed bark and weed stalks, lined with fine grasses and a few light colored rootlets." Mr. Daniels kindly presented the male to me (No. 4571, W. P. Coll.). It is in very fair plumage, being very much less worn than the Maryland specimen obtained by Mr. Figgins, which is now in the U. S. Nat. Mus. Collection. This record adds a species to the Virginia avifauna and doubtless it will be found to occur in summer over most of the eastern portion of the State.—WILLIAM PALMER, *Washington, D. C.*



**Breeding of the Rose-breasted Grosbeak at Beverly, New Jersey.**—On May 2, 1896, I recorded the first arrival of this bird at Beverly, and afterwards from day to day noted a male bird whistling from the tree tops in the lawns of adjoining properties to where I live. Knowing they were not early breeders I did not pay any particular attention to him until June 1, at which time he became so noisy with his continual outbursts of song, that I concluded to investigate, and soon discovered the female building the nest. The male would accompany her about the neighborhood while gathering material, and perch on the topmost branch of a nearby tree and whistle one strain after another. After incubation commenced he became more quiet, only whistling occasionally, and going off by himself on feeding trips, as I often heard him several squares away.

The nest was situated in the topmost branches or twigs of a small maple tree, about eighteen feet above the ground, and fifteen feet from the rear of a house along the river bank within the city limits of Beverly.

As this seems very unusual, as well as the most southern record for New Jersey, so far as I can ascertain, I concluded to record the note.—J. HARRIS REED, *Beverly, N. J.*

**On the Status of *Lanius robustus* Baird as a North American Bird.**—Having recently had occasion to again examine the type of *Lanius robustus* Baird, which I was fortunately able to do through the kindness of the authorities of the Academy of Natural Sciences of Philadelphia, I feel more sure than ever that the bird is not North American at all. It agrees in all characters but two, namely, the larger, more strongly hooked bill and peculiar pattern of the secondaries, with *L. algeriensis*; and two examples of the latter in the National Museum collection approach it so closely in the last respect that I have little doubt it is merely an 'aberrant' specimen or possibly a local form of that species.—ROBERT RIDGWAY, *U. S. National Museum, Washington, D. C.*

***Vireo flavoviridis* in Nebraska—a Correction.**—In order to avoid confusion, it becomes necessary to state that the bird on which the note in 'The Auk' (XIII, 263), recording the capture of *Vireo flavoviridis* was founded, has been found to be *V. olivaceus*.

In explanation of how this error occurred I will state that the specimen was somewhat abnormally colored, and according to the measurements given by Ridgway (Manual, 470), had a tail at least one inch shorter than the minimum length in *V. olivaceus*. Hence it was identified as *V. flavoviridis*. Since that time I have found, however, that the measurement of the tail, 3.15–3.30, given by Ridgway is in all probability an error. All of the authorities, Coues, Baird, Brewer, and Ridgway himself in his 'Ornithology of Illinois', do not give a maximum measurement of more than 2.50.—L. BRUNER, *Lincoln, Nebraska.*

**Reappearance of the Mockingbird at Portland, Maine.**—On March 6, 1897, just after my note<sup>1</sup> on his previous visits had gone to press and more than a fortnight after his last appearance up to that time, the Portland Mockingbird was seen by my mother in the woodbine on her house. I was at once sent for to make the identification certain. I had no difficulty in doing so, for he stayed quietly for a long time in the top of a small tree close to the house. A period of eighteen days followed during which he was not to be found, though I looked for him constantly about the city and its suburbs. On March 24 he was seen by Mr. Charles E. Noyes, who reported him singing. On March 28 he was seen by Mr. W. H. Dennett, and was carefully studied through an opera glass within a distance of some thirty yards. On neither of these occasions was he more than an eighth of a mile from the spot where he first appeared in January. Finally, on April 4, I met with him again myself, this time in an old and little used cemetery in the same section of the city as before. I walked within a few yards of him, and watched him for several minutes while he disputed with some Robins the right to a cluster of sumacs, the fruit of which had no doubt helped to carry him through the winter. Up to the present time (June 1), I have neither seen him nor heard of him since. If he stayed no later than April 4, he passed nearly eleven weeks in the neighborhood of Portland at the most inclement season of the year.—NATHAN CLIFFORD BROWN, *Portland, Me.*

**A Mockingbird at Worcester, Mass.**—A Mockingbird (*Mimus polyglottos*) visited us at Worcester, Massachusetts, this spring. The bird was heard singing at Green Hill, April 26, was seen on the 29th, and continued in the same locality through the month of May. He sang well, imitating notes of the Blue Jay, Phoebe and Brown Thrasher.—HELEN A. BALL, *Worcester, Mass.*

**Breeding of *Sitta canadensis* in Pennsylvania.**—In Warren's 'Birds of Pennsylvania,' he states that this species has been "found breeding in the mountainous regions" by Prof. H. J. Roddy. So far as I know this very general statement is all that we have on record upon which to include the bird among the summer residents of the State. It is therefore desirable to record the following more definite information regarding its occurrence.

On July 4, 1896, a young Red-breasted Nuthatch in first plumage was secured by Mr. Otto Herman Behr, near Lopez, Sullivan Co., Pa. Mr. S. N. Rhoads also noticed the species frequently in the vicinity of Round Island, Clinton Co., Pa., May 26–June 1, 1896, and later during the same summer at Eaglesmere, Sullivan Co.—WITMER STONE, *Academy of Natural Sciences, Philadelphia, Pa.*

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<sup>1</sup> Auk, Vol. XIV, pp. 224–225.

**A novel Idea of a Tufted Titmouse.**—On April 10, 1897, while wandering leisurely along the border of a wood outside of Beverly, N. J., my eye caught sight of the peculiar actions of a small bird ahead of me. Walking cautiously to within a reasonable distance and using my field glasses, I observed a Tufted Titmouse (*Parus bicolor*), as I supposed trying to drive a red squirrel away. The squirrel was lying flat on the upper side of a large sloping limb, and the Titmouse would approach cautiously from behind and catch at its tail. It was not long before I noticed that the bird had collected quite a mouthful of the hairs, with which it flew off to a hole near by where it was deposited. This is certainly one of the most interesting novelties in relation to nest building that I ever met with. A friend who was with me also observed the occurrence.—J. HARRIS REED, *Beverly, N. J.*

**Absence of *Turdus aonalaschkæ pallasii* at Tadousac, Quebec, in 1896.**—The almost complete absence of the Hermit Thrush from the vicinity of Tadousac during the summer of 1896 was very noticeable. During six weeks spent there in June and July, the only evidence I found of the presence of the birds was a single family seen one day late in July. In other years this species has been nearly as abundant as the Olive-backed Thrush (*T. u. swainsonii*), and many of each could be heard every day, but last summer the Olive-backs alone were heard, and I wondered where the Hermits had gone. The freeze of a couple of winters ago which was so destructive to the Bluebirds in the Southern States, doubtless is responsible, in part at least, for the sudden diminution in the number of Hermits, and I have already seen some allusion made to this species as one of the sufferers.—JONATHAN DWIGHT, JR., M. D., *New York City.*

**A Great Flight of Robins in Florida.**—Mr. James K. Knowlton of Swampscott, Mass., informs me that he saw an enormous flight of Robins (*Merula migratoria*) on February 14, 15, 16, 1897, at Hawks's Park, situated on a branch of Indian River, about one hundred miles south of St. Augustine, Florida. They came from a southerly direction, and were continually passing, alighting and repassing, on the above dates, the general movement being in a northerly direction. The air was full of them, and their numbers beyond estimate, reminding him of bees. Mr. Knowlton heard that this movement of Robins had been noted for a distance of *ten* miles away, *across* the flight. Mr. K. shot about one hundred as they flew past the house where he was staying; he could have killed a thousand, he says (so there is *something* to be grateful for!) and reiterates that, "he saw more Robins than he had heretofore supposed existed in the world." Though a sportsman all his life, and frequenting localities where large numbers of birds congregate, like Currituck Sound, he states, without hesitation, that this was the largest flight of birds he had ever *seen* in his life.—GEORGE H. MACKAY, *Nantucket, Mass.*

**Rare Birds in the Vicinity of Philadelphia.** — On Sept. 5, 1894, a specimen of *Contopus borealis* was secured near Holmesburg, Pa., and on May 18, 1895, a specimen of *Empidonax traillii alnorum* was secured.

This is, I believe, the first definite record for the latter in this part of the State, as I am unable to find any in Stone's 'Birds of Eastern Pennsylvania and New Jersey.' — WITMER STONE, *Academy of Natural Sciences, Philadelphia, Pa.*

**A Few Notes on the Avifauna Columbiana.** — A Swallow-tailed Kite (*Elanoides forficatus*) was observed flying over the Virginia side of the Aqueduct Bridge, by the writer, April 11, 1897. This bird is exceedingly rare here and records for this locality are scarce.

On the same date I took a set of eggs of the Turkey Vulture, about two and a half miles south of Falls Church, which is a very early date for this locality, and merits a notice.

As spring records for the Connecticut Warbler are scarce, it may not be amiss to say that I noticed a specimen May 9, 1897, in a swampy ravine, on Eastern Branch, south of the Reform School. — PAUL BARTSCH, *Smithsonian Institution, Washington, D. C.*

**Northern New Jersey Notes.** — In consequence of the lack of a New Jersey record of the Cerulean Warbler (*Dendroica rara*) in 'The Birds of Eastern Pennsylvania and New Jersey,' by Witmer Stone, I desire to note the capture of this species on an oak clad hill of Boonton, Morris Co., N. J., about the first of September, 1887. In the same township I took a young Henslow's Sparrow (*Ammodramus henslowii*) in a tussocky meadow on August 8, 1889. — SYLVESTER D. JUDD, *Department of Agriculture, Washington, D. C.*

**Bird Notes from Massachusetts.** — *Mniotilta varia*. — On the 15th of December, 1895, a single individual of this species was seen among the pear trees in the yard. A heavy snow-storm was raging at the time, but the bird was actively engaged clambering about on the trunks, on the sheltered sides of the trees, where the damp snow did not cling. This bird may have been the same one, seen in the same spot November 13, in company with a flock of Chickadees. On both occasions the bird was very tame and confiding, allowing me to approach near enough so see all its markings. It was not seen again after the snow, which was the first heavy storm of the winter.

*Dendroica coronata*. — On the 29th of July, 1896, a single bird was seen in an orchard at Mt. Wachusett, Mass. It was engaged in catching flies and other insects, and several times uttered its characteristic *tchuck* and *wheest*. The occurrence of this species at this date seems noteworthy as being several weeks earlier than the usual appearance of the bird in this region.

*Junco hyemalis*. — It is interesting to note that two pairs of Slate-colored Juncos nested on the summit of Mt. Wachusett during the summer of

1896. The mountain is about 2500 feet in height, and the birds stayed at the top, which is a few feet above timber line, but after the young were well grown all the Juncos formed a small flock, and frequented the tract comprising the border of the timber, rarely going more than a few rods from the timber line. — GLOVER M. ALLEN, *Newton, Mass.*

**Three Birds rare in Framingham, Massachusetts.** — *Hydrochelidon nigra surinamensis*. — June 20, 1889, found my brother with the writer floating in our canoe, down the Sudbury River in Wayland near the dividing line of Wayland and Sudbury. We had arrested the canoe's progress opposite a bunch of lily pads, hoping to draw a pickerel from the shady depths, when our attention was drawn towards a small dark colored bird, also fishing for some member of the finny tribe. I caught up the gun and fired but missed. Further down the river we again met the bird and at long range dropped it into the water. I had never seen the bird before, but descriptions pronounced it a Black Tern, which it proved to be; a perfect adult male in full plumage. The bird was so near the line when first seen that I enroll it in the list of our birds. Since then, I understand that Mr. C. J. Maynard, of Newtonville, Mass., secured a companion bird, possibly about ten days previous, near the same place.

*Colymbus holboellii*. — A fine adult female of this species in perfect plumage, was brought me by a boy who said he shot it in a pond entirely surrounded by a medium growth of hardwood trees located at the westerly part of the town. It was accompanied by a second, possibly the male, which remained near by for some time, but he was unable to get a shot at it. Two young birds of this species in fall plumage were shot on the Sudbury River this last fall.

*Sylvania mitrata*. — On going out to the barn Sunday evening, Oct. 15, 1893, to do the accustomed chores, I found a small bird flying about the grain room. At first, thinking it was an English Sparrow, I paid little attention to it but a second glance in its direction, when the light from the lantern revealed the coloring of the head, I saw it was not a Sparrow. I, therefore, shut the door and an exciting chase ensued; finally the little bird dropped exhausted behind the grain barrels, and none but ornithologists in localities where the Hooded Warbler is so rare, can judge of my delight when in looking over the barrels I beheld the upturned face of this beautiful bird. I carried it into the house and gave it full possession of the birdroom. On returning from business Monday noon I found the little bird lying dead on one of the cases, probably from starvation, as the stomach was entirely empty. I judge the bird was driven from its course by the severe storm of two days previous. In plumage it is equal to any adult male in my collection taken during the months of May and June in the South. — H. D. EASTMAN, *Framingham, Mass.*

**Bibliographical Note.** — The obituarists of the late Major Bendire are in doubt or in error regarding his earliest direct or indirect contributions



to ornithology (Science, Feb. 12, 1897; Osprey, Mar., 1897, p. 88). The record of Bendire material published by myself will be found in full in my 'Check-List,' 2d ed., 1882, pp. 150, 151; and that published by others for him, or by himself, to 1878, in Birds Coll. Vall., pp. 694, 695, 718, 729, or to 1880 in Bull. U. S. Geol. Surv. Terr. V, Sept. 30, 1880, as pp. 551, 568, 583, 607, 748, 749, 972, etc. But the latter publication is not indexed, and all the Bendire matter it may contain is not easily found; also, titles as cited of other matter than that by himself are not all identifiable as Bendirean without reference to the articles themselves. Some little search shows the following, 1872-76:

1872. COUES, E. A New Bird to the United States. < *Amer. Nat.* VI, June, 1872, p. 370.  
*Glaucidium ferrugineum* (*G. phalænoides* of A. O. U. List), taken in Arizona by Bendire, and sent to me. So far as my investigation or recollection goes, this is his first appearance in print.
1872. COUES, E. The Nest, Eggs, and Breeding Habits of *Harporhynchus crissalis*. < *Am. Nat.* VI, June, 1872, pp. 370, 371.  
 Based on Bendire's MS. and material.
1872. RIDGWAY, R. Occurrence of *Setophaga picta* in Arizona. < *Am. Nat.* VI, July, 1872, p. 436.  
 Based on Bendire, as before.
1872. COUES, E. Nest and Eggs of *Helminthophaga luciae*. < *Am. Nat.* VI, Aug., 1872, p. 493.  
 Based on Bendire, as before.
1872. COUES, E. Occurrence of Couch's Flycatcher in the United States. < *Am. Nat.* VI, Aug., 1872, p. 493.  
 Based on Bendire, as before.
1873. COUES, E. Some United States Birds, New to Science, and other Things Ornithological. < *Am. Nat.* VII, June, 1873, pp. 321-331.  
 Based on Bendire, as before. The new species are *Harporhynchus bendirei* and *Peucaea carpalis*.
1873. BREWER, T. M. Description of some Nests and Eggs of Arizona Birds. < *Proc. Bost. Soc. Nat. Hist.*, XVI, 1873, pp. 106-111.  
 Based on Bendire, as before.
1874. RIDGWAY, R. Two Rare Owls from Arizona. < *Am. Nat.* VIII, Apr., 1894, pp. 239-240.  
 Based on Bendire, as before. The Owls are *Syrnium occidentale* and *Micrathene whitneyi*.
1876. ALLEN, J. A. Breeding of the Canada Goose in Trees. < *Bull. Nutt. Club*, I, July, 1876, p. 50.  
 Based mainly on Bendire.
1876. ALLEN, J. A. *Anser rossii* in Oregon. < *Bull. Nutt. Club*, I, Sept., 1876, p. 52.  
 Based on Bendire, as before.
1876. ALLEN, J. A. Geographical Variation in the Number and size of the Eggs of Birds. < *Bull. Nutt. Club*, I, Sept., 1876, pp. 74, 75.  
 Based on Bendire.



The first paper ostensibly by Bendire may be that on the nest and eggs of Clark's Crow, in *Bull. Nutt. Club*, I, 1876, pp. 44, 45, though this is actually written by Dr. Allen from Bendire's MS. The first formally and actually by him may be that on the Birds of Oregon, in *Pr. Bost. Soc. Nat. Hist.* XIX, 1877, pp. 109-149. For a note on his introduction to ornithological print see *The Osprey*, Apr., 1897, p. 113.—ELLIOTT COVES, Washington, D. C.

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## RECENT LITERATURE.

Ridgway's *Birds of the Galapagos Archipelago*.<sup>1</sup>—The Galapagos Archipelago has come to be classic ground in ornithology. In the present paper of over two hundred pages Mr. Ridgway treats the subject exhaustively, so far as available material and previous work permits. Yet it is evident that the field is as yet far from thoroughly worked. From some of the sixteen islands that compose the group only scant material has been obtained. Says Mr. Ridgway: "Not a single island of the group can be said to have been exhaustively explored, and few of the species are known in all their various phases; in fact, many are known only from a few specimens in female or immature dress. No observations have been made 'upon the attitude the different species of *Geospiza* maintain toward one another tending to show how far the differences observable, or thought to be observable, in dried specimens indicate the actual grouping in species of living individuals.' The anomaly of individuals adult as to plumage but with bills suggesting immaturity, and of others which show exactly the reverse, remains to be explained; and there are other questions which only protracted field-studies by a competent investigator can decide. Until all these present mysteries are solved, theories and generalizations are necessarily futile."

Regarding the origin of the Galapagoan fauna, Mr. Ridgway considers that the time has not yet arrived when theorizing may be indulged in with any great degree of confidence. He notices briefly the two leading theories respecting the origin of the Galapagos group of islands—namely, the old and formerly generally received conception that they are

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<sup>1</sup>Birds of the Galapagos Archipelago. By Robert Ridgway, Proc. U. S. National Museum, Vol. XIX, No. 1116, pp. 459-670, pll. lvi, lvii, with 7 cuts and numerous distribution charts in the text. Dated 1896; issued March, 1897.

volcanic, and Dr. G. Baur's theory that they are the remnants of a former large oceanic land area—and presents the evidence afforded by the birds. He considers in this connection the relationships of the five peculiar Galapagoan bird genera, and finds that only two “are of evident American relationship. The remaining three have so obvious a leaning toward certain Hawaiian Dicaeidae forms that the possibility of a former land connection, either continuous or by means of intermediate islands as ‘stepping stones,’ becomes a factor in the problem. It may be,” he adds, that the resemblance of these three genera to “Hawaiian forms is merely a superficial one, and not indicative of real relationship. I do not by any means claim, on the strength of such evidence, a common origin for them, but merely present the facts as ‘food for reflection.’”

In this connection Mr. Ridgway gives a summary of the ranges of the genera of Galapagoan birds, without, however, deriving from this study any decisive evidence as to “whether the non-peculiar portion of the Galapagoan avifauna is most nearly related to that of the adjacent mainland of South America or that of lower Central America or the West Indies.”

Mr. Ridgway comments on the perplexing difficulties that beset the discrimination of the many closely related forms, and says that “when ever there seemed to be a well-defined average difference between specimens from different islands, I have not hesitated to separate them as local forms. No other course, indeed, was practicable; for were ‘lumping’ once begun there could be no end to it, unless purely arbitrary limits were given to the species recognized, and if followed to a logical conclusion might easily end in the recognition of a single variable species, equivalent in its limits to the genus.”

The distribution of the 105 species thus far recorded from the Galapagos Archipelago is shown in a series of tables, as to the group of islands collectively, and for each island individually. Then follows the detailed treatment of the species, with charts showing their distribution in the Galapagos Islands. It is interesting to observe that five-sixths (53 species) of the Passerine birds belong to four genera—*Nesomimus*, *Certhidea*, *Geospiza*, and *Camarkynchus*—peculiar to the Galapagos, and that half the remainder belong to the genus *Pyrocephalus*; and that all but two of the 61 species of Passerine birds are peculiar to the Islands, the other two being of casual occurrence. Most of the remainder are wide-ranging water birds, with a few species peculiar to the Galapagoan fauna.

The species are treated exclusively from the systematic standpoint, giving their synonymy and bibliography, with full descriptions, tables of measurements, and their ranges, together with discussions of their relationships. The paper concludes with a bibliography of all the works and papers relating to Galapagoan ornithology. Mr. Ridgway has thus given us a detailed and masterly monograph of the birds of the most interesting and instructive group of islands known to science.—J. A. A.

**Cooke's Birds of Colorado.**<sup>1</sup>—In this Bulletin of 143 pages, Prof. Cooke, attempts "to set forth our present knowledge of the distribution and migration of Colorado birds. There is also included a bibliography of the subject and an historical review of the progress of ornithological investigation in this State." The total number of species and subspecies thus far known from the State is 363 (see p. 128), of which 230 have been found breeding within the State. The records given "are based first of all on all the printed matter that has appeared dealing with the birds of Colorado. This mass of material has been supplemented by much manuscript matter, and by personal observations of the author during a four years' residence in the State. . . . The only claim for completeness made by the present list is that it is complete so far as work done up to this time is concerned. Experience in this State as well as in others teaches that additions will be made for many years to come." As the writer says, many parts of the State have never been visited by an ornithologist, including many areas of large extent; the work thus far done has been limited to "the region along the eastern base of the foothills," "thirty miles wide and one hundred and fifty miles in length," to which "four-fifths of all the records of Colorado pertain." There is thus, as Prof. Cooke emphasizes, inviting fields here for further ornithological research.

A few pages are given to the topography and climatology of the State, followed by acknowledgments to collaborators for valued assistance. Next follows a series of twelve lists classifying the birds in accordance with the nature of their occurrence, as residents, winter visitants, etc., A tabular statement of dates of arrival (pp. 18, 19) is then given for four points, — St. Louis, Mo.; Fort Lyon, Loveland, and Idaho Springs, Col. An annotated 'Bibliography of Colorado Ornithology' occupies pp. 20-39, numbering 182 titles, beginning with Pike, 1807. Then follows 'The History of Colorado Birds' (pp. 40-48), in which the more important of the papers listed in the 'Bibliography' are taken up chronologically and further summarized, followed by a tabular recapitulation of the species added to the State by the successive authors. The annotated list of 'The Birds of Colorado' occupies pp. 49-128, entered under the A. O. U. numbers and names. The annotations indicate quite fully the nature of the occurrence of each species within the State, including relative abundance, dates of immigration, and the portions of the State it frequents, and where it breeds. No species is apparently included without good evidence. A few additional species are given (in brackets in small type) that have been taken on the borders of the State, under circumstances that indicate their probable occurrence within the limits of Colorado. A very full index (pp. 129-143) concludes the paper, which has evidently been prepared with great care and thoroughness, and with the expenditure of

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<sup>1</sup>The Birds of Colorado. By W. W. Cooke. Bulletin No. 37, State Agricultural College, Fort Collins, Colorado, March 17, 1897. 8vo, pp. 143.

much time and labor. Indeed it may well be taken as a model for a State list. We note, however, that the Wheatear (*Saxicola ananthe*) is referred to as "A European species, straggling to New England, and once taken at Boulder," Colorado, whereas it is a not uncommon bird in Greenland, Labrador, and other parts of Arctic America. We regret to see, however, that in the section devoted to the history of Colorado Ornithology, generic names are printed with a lower case initial letter, which is not only unusual and unsightly, but renders it much more difficult to individualize quickly the names of the species in a running glance through the paragraphs. For this it is hoped the author is not responsible. Typographical errors are scarce, particularly in technical names, and the paper as a whole is very creditably printed.

The announcement is made that copies may be had gratuitously on application to the Director of the Agricultural Experiment Station, Fort Collins, Colorado. — J. A. A.

**Miller on Construction of Scientific Names.**<sup>1</sup>—This paper is designed, as stated in a note by the publication committee of the California Academy of Sciences, as "a comprehensive, and at the same time readily accessible and reliable, treatise on the rules that should govern the selection and formation of scientific names derived from Greek and Latin," the committee believing that such a treatise would prove useful to local botanists and zoölogists of Western North America for many years to come; and they might well have added, of Eastern North America as well. Says the author: "Various scientific writers have arbitrarily departed from the philologically correct method of nomenclature established by Linnaeus; moreover some difference of opinion now prevails in regard to the formation, gender and inflection of certain New Latin words derived from the Greek. Definite rules have been wanting, or at least not readily available. Accordingly, at Dr. Jordan's request, and with his kind assistance, I have undertaken to formulate a set of rules based upon philological principles and at the same time agreeing with the practice of consistent nomenclators. Ultra-purism, however, as the writing of *ai* and *oi* for the Greek *ai* and *oi* or of *k* for Greek *κ*, shall have no more consideration than the philological monstrosities produced by a Rafinesque or a Swainson."

The rules given by Prof. Miller are clear and concise, and will certainly be welcome to a large proportion of at least the younger systematists who find themselves called upon now and then to provide names for new genera and species or even higher groups. The rules are intended to give directions as to how to construct properly names derived from Greek and Latin, in future work; they are not intended to be retroactive, for

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<sup>1</sup> Scientific Names of Latin and Greek Derivation. By Walter Miller, Professor of Classical Philology, Leland Stanford Jr. University. Proc. California Academy of Sciences, 3d. Ser., Vol. I, No. 3, pp. 115-143.

the correction of past errors. As Prof. Miller, who has of course due regard for philological proprieties, well says: "We may recognize the law of priority as absolute, and retain the many monstrous and misspelled names to be found on the records of natural history, just as their makers left them. They are historic facts and serve to mark the group of animals or plants to which they apply, but these misshapen forms of words are not ornamental and they are unworthy of scholars. It is to be hoped that, in future, greater care may be taken to make words that give correctly the idea the author may have intended. . . . It costs no more to frame a name properly than to leave it a monstrosity."—J. A. A.

**Chapman's Notes on Birds Observed in Yucatan.**<sup>1</sup>—In the present paper Mr. Chapman gives the ornithological results of his short excursion to Yucatan, where, in March, 1896, he spent about three weeks at Chichen-Itza in the study of bird-life. Seventy-four species were observed, a list of which, together with critical notes and remarks on habits, are here given, preceded by a short sketch of the physical features of the region and the derivation of its avifauna.

A new genus, *Agriocharis* (p. 288), is created for the reception of the Ocellated Turkey; and an attempt is made to prove the Guatemalan Green Jay specifically distinct from the Rio Grande bird. With the latter we are unable to agree.

A very useful list of the principal contributions to Yucatan birds concludes the paper. — C. W. R.

**'Upon the Tree-Tops.'**<sup>2</sup>—Students of birds out of doors will welcome a new volume by Mrs. Miller. Her enthusiastic and careful observations of the home-life of birds have not only added to our knowledge of the habits of species whose ways we supposed were well known, but they have shown how much there is in bird-life to interest every stroller in the woods and fields. It is the human-like nature of birds that appeals to Mrs. Miller and in writing from this point of view she brings birds nearer to us and arouses a sympathetic interest in them even among readers to whom her feathered friends are strangers.

In the present volume we have accounts of the Loggerhead Shrike, Winter Wren, Yellow-breasted Chat, Ruby-throated Hummingbird, and more or less extended observations on numerous other birds in chapters entitled, 'Tramps with an Enthusiast,' 'Young America in Feathers,' 'Down the Meadow,' 'In a Colorado Nook,' and 'The Idyl of an Empty

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<sup>1</sup>Notes on Birds observed in Yucatan. By Frank M. Chapman. Bulletin of the American Museum of Natural History, VIII, pp. 271-290, Dec. 11, 1896.

<sup>2</sup>Upon the Tree-Tops. By Olive Thorne Miller. Illustrated by J. Carter Beard. Boston and New York: Houghton, Mifflin and Co. The Riverside Press, Cambridge, 1897. 16mo, pp. ix + 245, pll. x.



Lot.' Unfortunately the locality at which these notes were made is in some instances given in only a general way, while in others it is wholly omitted.

The two concluding chapters are written from the 'Bird-Room' and give detailed studies of the Clarin (*Myiadestes unicolor*, not *M. obscurus*, the latter being known as the Jilguero) and Orchard Oriole in confinement.

It is difficult to overestimate the value of books of this class. They reach an audience to whom the ordinary 'bird-book' is unknown and we feel assured that the present greatly increased desire for information about our birds is largely due to the influence of just such books as Mrs. Miller's. — F. M. C.

**The Sharp-tailed Sparrows of Maine.**<sup>1</sup> — Mr. Norton records the breeding of *Ammodramus caudacutus subvirgatus* in 'fair' numbers at Small Point, Sagadahoc County, the first time this race has been discovered nesting in the State. In discussing the relationship of our three forms of Sharp-tailed Finches it is very pertinently suggested that as typical *Ammodramus caudacutus* is known to breed at Scarboro', only some thirty miles west of Small Point, it is quite probable that *subvirgatus* and its western representative *nelsoni* are specifically distinct from *caudacutus* and should therefore stand as *Ammodramus nelsoni* and *Ammodramus nelsoni subvirgatus*. — F. M. C.

**The Story of the Farallones.**<sup>2</sup> — In an attractive little booklet of thirty-two pages Mr. Barlow gives an interesting sketch of the Farallones and their bird-life. Numerous half-tone reproductions of photographs afford an excellent idea of the topography of the islands, the dangers of 'egging,' and the nests and numbers of certain of the sea-birds that have made these barren rocks famous. — F. M. C.

**Bird-Nesting with a Camera.**<sup>3</sup> — Parts III and IV of this work appeared respectively in April and May, the latter part concluding the first volume of a book which will long hold first place among those

<sup>1</sup> The Sharp-tailed Sparrows of Maine with Remarks on their Distribution and Relationship. By Arthur H. Norton. Proc. Portland Soc. Nat. Hist., II, 1897, pp. 97-102.

<sup>2</sup> The Story of the Farallones. Text by C. Barlow. Arranged and Published by H. R. Taylor, Editor of the Nidologist. Alameda, California, 1897, oblong 16mo, unpagcd, numerous half-tone illustrations. Price 50 cents.

<sup>3</sup> Among British Birds in their Nesting Haunts. Illustrated by the Camera. By Oswin A. J. Lee. Parts III and IV, Edinburgh, David Douglas. Folio, Part III, pp. 79-120, pll. X; Part IV, pp. 121-159, pll. X.



devoted to illustrating the nests of birds. Part III contains plates of the nests and eggs or nests and young of the Long-tailed Tit (two plates), Black-headed Gull, Little Grebe (two plates), Golden Plover, Lapwing (two plates), Herring Gull, Greenshank. In Part IV, nests of the following species are figured: Woodcock, Oyster-catcher (two plates), Tree Pipit, Reed Bunting, Ringed Plover (two plates), Little Tern (two plates), Jackdaw. — F. M. C.

**Birds of Wellesley.**<sup>1</sup> — The author states that this list "is designed especially for the use of students in Wellesley College, and others interested in the bird-life of Wellesley and surrounding towns, its chief purpose being to give an approximately correct idea of the bird-life of the district, and serve as a convenient pocket guide to observations," and it is admirably adapted to meet this end. It is well summarized as containing "75 water-birds and 169 land-birds, in all 244 species and varieties. Of these about 23 are visitors from the coast, and about 36 are accidental wanderers from various points of the compass, chiefly from the West and South. Of the 185 species remaining, 95 land-birds and 20 water-birds are fairly common, and should be met with by an ordinary observer in the course of a year, while the remaining 70 are either scarce or irregular in distribution, and are unlikely to be seen except by special effort or good fortune."

Each species is annotated with reference to its time and manner of occurrence, haunts, and in the case of breeding species, location of nests, and there are also cross-references to text-books treating of the birds of the same region.

While lists of this kind may not have sufficient value to deserve publication in an ornithological magazine or the proceedings of a natural history society, their value to local bird-students is undoubted, and we trust Mr. Morse's excellent list may be followed by others of similar character throughout the country. — F. M. C.

**Nehrling's Birds: Vol. II.**<sup>2</sup> — Previous notices<sup>3</sup> of this interesting work have given its scope and character so fully that the reviewer in the present instance has little to do beyond attesting the fidelity with which the promise of earlier portions has been kept to the end, and congrat-

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<sup>1</sup> Annotated List of Birds of Wellesley and Vicinity, Comprising the Land-birds and most of the Inland Water-fowl of Eastern Massachusetts. By Albert Pitts Morse, Curator of the Zoölogical Museum, Wellesley College. Published by the Author: Wellesley, Mass., 1897. 16mo, pp. 56, one plate.

<sup>2</sup> Our Native Birds of Song and Beauty, being . . . etc. By Henry Nehrling. Vol. II. Milwaukee: George Brumder. 1896. Large 4to or sm. folio, title-leaf and pp. 1-452, pll. col'd xix-xxxvi. (Pub. in Parts, 1894-96.)

<sup>3</sup> Auk, Jan. 1890, p. 70; Apr. 1894, pp. 160, 161.

ulating the genial author upon the successful issue of his undertaking. The second volume, completed this year upon the appearance of the final one of the numerous parts in which the whole has been issued, carries the Birds "of Song" through the remainder of the oscinine Passerines, while those "of Beauty" include the clamatorial Passerines, the Picarions, and the Psittacines. These are illustrated upon 18 colored plates — a few of the subjects of these compositions having been already treated in Vol. I — raising the number of plates to 36, evenly balanced between the two volumes in which the work is now finally bound. They are handsomely bound in full Russia, gilt-edged, and beautifully printed with rubricated margins and other typographical elegancies. There is no falling off in the execution of the plates, and in fact no more luxurious a work on ornithology has appeared in this country of late years. Mr. Nehrling steadily maintains to the finish the faithful and careful preparation of the text to which he addressed himself in the beginning; it is written with fine feeling, good temper, and excellent judgment, to present popular life-histories which shall "combine accuracy and reliability of biography with a minimum of technical description." The birds with which the author is familiar from personal experiences are treated in greatest detail — some of them as completely as by any previous writer; and the rest are handled with judicious eclecticism in borrowing from the writings of others, always with generous acknowledgement. The author shows great tact in this particular — it is the reverse of that scissors-and-pastepot method of compilation which pads too many popular treatises. No more attractive and presentable volumes on our birds are now before the public; and we trust that this labor of love, as it certainly has been on Mr. Nehrling's part, may meet with the full measure of recognition it so well deserves. The author has taken and will long maintain a unique position in North American ornithology; we did not prophesy aside from the mark, though we ventured to do so before the event, in recording our conviction that Nehrling would awake some day to find his writings ranked with those we are accustomed to call classic.—E. C.

**Chapman's 'Bird-Life.'**<sup>1</sup> — When Mr. Chapman's excellent 'Handbook of the Birds of Eastern North America'<sup>2</sup> was published it was very evident that the author had made a special study of the needs of young students of ornithology and other non-professional bird-lovers. That his task had been admirably executed is a matter of general information;

<sup>1</sup> Bird-Life | A Guide to the Study of | Our Common Birds | by | Frank M. Chapman | Assistant Curator of the Department of Mammalogy and | Ornithology in the American Museum of Natural | History, etc. | With seventy-five full-page plates and | numerous text drawings | by Ernest Seton Thompson | author of Art Anatomy of Animals, the Birds of Manitoba, etc. | New York: D. Appleton and Company. 1897. 12mo. pp. xii + 269.

<sup>2</sup> Cf. Auk, Vol. XII, pp. 282-284.

and therefore, when the preparation of a second book by Mr. Chapman was announced, bird students awaited its publication with great interest. That their expectations will not be disappointed is reasonably sure, for 'Bird-Life' is a work of equal merit with the 'Handbook,' and will doubtless, by reason of its wider scope and somewhat different purpose, prove even more generally useful. Although conceived in the same spirit the two books are nevertheless quite distinct in their character; for, while the 'Handbook' is, as its title indicates, essentially a systematic and descriptive synopsis of the birds of the eastern United States, 'Bird Life,' although of less extent, is more comprehensive in its plan, the first seven chapters being devoted to as many distinct subjects. Thus, on seventy-three of the two hundred and sixty-one pages of text the relations of birds to man, evolution, coloration, migration, voice, nesting, and kindred topics are discussed concisely, entertainingly, and instructively, the concluding portion consisting of a "field key" to the common land-birds of the northeastern United States. This last portion of the book embraces two parts so essentially distinct from one another that it would seem a separate title should have been given to the latter portion, since it is not in any sense a 'key,' but a descriptive synopsis.

The "field key" proper, which covers something over eight pages, is very different from the 'keys' of the 'Handbook,' being a purely artificial grouping of more than one hundred familiar species according to (1) habits and (2) coloration. The species are divided into three main groups, as follows:—"First Group. Birds that catch their insect food in the air;" "Second Group. Climbing and Creeping Birds"; "Third Group. Birds not included in the preceding groups." The third group is subdivided into five sections, according to coloration. Section I, includes those species with yellow or orange in the plumage; Section II, with red in the plumage; Section III, with blue in the plumage; Section IV, birds conspicuously black or black and white; Section V, birds not included in the preceding sections.

While the utility of keys based upon such purely artificial characters, for the more ready identification of birds by persons wholly unfamiliar with even the rudiments of classification, may not be questioned, it is very evident that Mr. Chapman's efforts in this line are not entirely successful; it is probable, however, from the nature of the case, that no one else will be able to do better. In the first place Mr. Chapman found it necessary to exclude females and young, a restriction at once minimizing the value of the key; again, the same species is repeated in different sections, the Ruby-crowned Kinglet occurring among species which are said to be *without* red in the plumage and also among those which *have* red; Section V, includes a species (Towhee) embraced also in section IV; and although the third group is stated to contain "birds not included in the preceding groups" it nevertheless does include two species (Kingbird and Flicker) placed also in the first and second groups, respectively. It also seems that the first group is not very satisfactorily limited, since many

an observer would naturally seek there the name of some Red-headed Woodpecker, Cedarbird, Redstart, or Fly-catching Warbler which had attracted his or her attention.

The untitled portion following the field-key takes up in systematic order (following the sequence of the A. O. U. Check-List) the species mentioned in the key, and describes, somewhat in detail, but very interestingly, their salient characteristics of habits, voice, etc. Several statements in this portion of the work may, however be fairly questioned while others require correction. Of Grebes, it is said (p. 86) that they "are quite helpless on land. They can not even stand erect on their toes . . . but when resting, support themselves on the whole length of the foot or tarsus." Grebes, however, are not only able to stand erect on their toes, and frequently do so, but walk also in this position. Plovers are characterized as differing from Snipe in possessing "three instead of four toes"; a very erroneous diagnosis, since several genera of Plovers possess a well-developed hallux while some Snipe have none! Woodpeckers are said (p. 136) to be "represented in all the wooded parts of the world except Australia and Madagascar." They are quite wanting also in New Guinea, New Zealand, and the whole of Polynesia, and a recent high authority states that no species of the family is known to have occurred in Egypt. Young Hummingbirds are likened to "a tangle of tiny pink limbs and bodies" (p. 149). Are young Hummingbirds, even when newly hatched, ever pink? Those that I have seen were very dark-colored—a sort of livid gray or slate-color.

The particular points to which attention is called above are, of course, comparatively trivial inaccuracies. Not so, however, the statement (on page 2) that birds, like reptiles, have the heart three-chambered, since it is well-known that in this respect birds agree with mammals (which have a four-chambered heart) and not with reptiles.

These criticisms of 'Bird-Life' are not made in any captious spirit, but to show that the book, like practically all others, is not wholly free from faults. It may truthfully be said that 'Bird-Life' is a book which will prove most useful to those requiring the kind of information which it professes to give, and which no other book supplies in so concise and entertaining a form. The illustrations are, in the main, excellent, and of course add greatly to both the utility and attractiveness of the volume.

—R. R.

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## CORRESPONDENCE.

### The A. O. U. Check-List.

EDITORS OF 'THE AUK':—

*Dear Sirs:*—I have been much impressed with Dr. Coues's arraignment of the arrangement of our present Check-List—having felt for some time its deficiencies, but scarcely daring to hope for its improvement. While, of course, aware of the real difficulties in the way and the clash of opinions that must arise when the anchors are raised, I believe that there is a call now not only for a rearrangement of the genera and species in many places, but that, in some instances, this should extend to the families—just possibly to an order or two.

With our present sequence of orders, many of the families, as they now stand, express a propinquity or continuity of kinship that is not always the sequence of the probable development; and the question may arise in some minds, which of these two relationships is the more important. But in most cases the interests may both be as well or better expressed by the newer arrangement. Thus in the Paludicolæ, while the Rallidæ are certainly the lowest or nearest the *Apteryx* and the Podicipidæ, yet in our linear arrangement they are not contiguous to either of these groups; but since they precede the Limicolæ, their high position in their own order places them rightly as the next of kin to this order above. While this may seem a rather 'natural' gradation the position of the Jacanidæ in the Limicolæ, viewed from either standpoint, seems preposterous, when we recall how Ralline is its structure. If we had in our North American birds any of the many connecting links that lie between the Limicolæ and the Herodiones, the Jacanidæ might be crowded away from the lower edge of its order by the stronger claims of these; but our presumption is that our list expresses the best sequence of our own birds.



But in the Gallinæ just the opposite thing may be thought to prevail. Following the Peristeropodan line of kinship, the Cracidæ might remain on the Columban edge of this order; but this certainly very much embarrasses the evolutionary order in the Gallinæ, and since the Peristeropodes are a very erratic branch, we might as well run the relationship from the Tetraonidæ around through the American genera *Geotrygon* and *Starnonas* (not having the Old World connecting links) and thus properly rearrange the generic sequence in the Columbæ. Within many orders, as the Raptore, the present order need not be disturbed.

Touching the sequence of families in the Passeres, it is doubtful if any agreement could be had. Notwithstanding the low indications of their tarsal envelopes, I should like to see the Alaudidæ, as indicated by Sharpe, placed nearer the Fringillidæ and Motacillidæ, but I presume there are many who would not consent to it.

With regard to the genera — especially in these Passerine families: — If the Icteridæ are to precede the Fringillidæ (which with the Corvidæ low down seems inevitable) then surely *Dolichonyx* and *Molothrus* should be at the end of their family rather than at the beginning; and with the Tanagridæ naturally following, some rearrangement of the general heterogeneousness seems necessary in the grosbeaked Fringillidæ at least. In some families, also, the present sequence seems fairly natural, as in the Mniotiltidæ.

As Dr. Coues has said, our numbers are mixed and our method clumsy. Something much better can be gotten up — especially with a view to interpolation. Rearrangement would also give us a chance to give the genera a revision in the light of our newer knowledge — with possibly a touch or so upon the families. For my part, because of striking differences in form and habit, I would like again to see the Mimidæ free from the Troglodytidæ — believing slightly in some revision being reversionary, yet progressive.

Very truly yours,

Mexico, Mo.

JAMES NEWTON BASKETT.

TO THE EDITORS OF 'THE AUK': —

*Dear Sirs:* — Dr. Coues's Article, 'The most General Fault of the A. O. U. Check-List,' in the April 'Auk' forcibly calls to mind a remark my father made when the first Check-List came out, *viz.*, that it was like removing the pole of a wagon to the rear axle and leaving the seats as they were before.

I have not had an opportunity to compare opinions on the subject of late years with ornithologists but to express my humble opinion, it seems to me that but one course remains and, as Dr. Coues so ably expresses it, that the "Check-Lists now extant be officially cancelled and formally repudiated in the near future."

It seems to me this can not be done any too soon, as we must come to it eventually.

Also, when this sequence of genera, species, etc., has been rearranged, let a host of various subspecies be subjected to the most rigid examination, so that the presence or absence of a certain shade of color, a spot or a streak here or there is not made sufficient basis to found a subspecies on.

Milton, Wis.

LUDWIG KUMLIEN.

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## NOTES AND NEWS.

ROBERT HOE LAWRENCE, an Associate Member of the American Ornithologists' Union, died at Danville, Ill., on the 27th of April, 1897. For a number of years he was a frequent contributor to 'The Auk.' In 1892 he published an account of the birds of the Gray's Harbor region (Vol. IX, 1892, pp. 39-47, 352-357), where he had spent almost a year in one of the dense forests of Washington.

Mr. Lawrence was a son of DeWitt C. Lawrence, of New York, and a grandson of Richard M. Hoe. He was born in New York, October 16, 1861. From his early boyhood he showed a great love of nature and out-door life. Much of his life he had spent in travel, and for the last seven years he had lived on the Pacific Coast, in Washington, Oregon, and Southern California.

Always a lover of nature, he became in his later years especially interested in ornithology. He was drawn to the study of birds by his love of music and his sense of beauty. His trained ear found in the notes of birds suggestions of the themes of Beethoven, Schubert, and Chopin, his favorite composers. He had besides a strong feeling for art and letters; but what endeared him to his friends and makes his memory precious was his faithfulness to his ideals of true and pure manhood.

PROFESSOR EDWARD DRINKER COPE died at his home in Philadelphia, April 12, 1897, at the age of nearly 57 years, he having been born July 28, 1840. In his death science has lost one of the greatest naturalists America has yet produced. As a vertebrate zoölogist and palæontologist, the world has seen few that can be ranked as his equal. Although not especially recognized as an ornithologist, as he published little on recent birds, he is known to have possessed, and on occasions displayed, a profound general knowledge of the class, and to have had a good field knowledge of the birds of eastern North America. In other departments of vertebrate zoölogy he has long been recognized as one of the highest authorities, especially in reptiles, both recent and extinct, while his contributions to mammalian palæontology have been almost unrivalled. He is also the author of several epoch-making schemes of classification, including especially one of fishes, and is properly recognized as one of the chief founders of the Neo-Lamarckian school of evolutionists, of which he was one of the most able exponents. He was gifted with a powerful

intellect, remarkable keenness of observation, and, in the main, admirable judgment. As one writer has tersely and wisely said of him, "One hesitates which to admire the most, the tenacity of his memory, the brilliancy of his wit, or the ease with which he used his enormous erudition. To any community, and at any time, the loss of such a man is a calamity." It is therefore more than fitting that a few lines should be here devoted to his memory. As editor for many years of the 'American Naturalist,' he is doubtless well known to the readers of 'The Auk,' who will find elsewhere the record of his achievements and honors.

THE CANTABRIGIA CLUB of Cambridge, Mass., a flourishing organization of women, has just done an excellent work for its city. After arousing interest in bird-life and its protection, by a bird mass meeting, to deepen the interest and spread a knowledge of birds, it secured the services of Olive Thorne Miller to give a course of bird talks, in the large hall of the English High School, holding 600, and issued free invitations to all the teachers of the Cambridge schools. The course of ten talks was given mostly on consecutive days at 4.30 p. m., beginning on May 25, and was attended by several hundred interested and enthusiastic teachers, who at the close offered a set of resolutions warmly expressing their thanks to the Club, and their appreciation of the talks.

THE AUDUBON SOCIETY OF THE STATE OF NEW YORK, the organization of which in February, 1897, was noticed in the April 'Auk,' is inaugurating an active campaign in the interest of bird-protection throughout the State. Circulars recently issued by the Society include an 'Appeal to Boys,' 'The Wearing of Herons' Plumes or Aigrettes,' 'The Economic Value of Birds,' a reprint of Circular No. 17 of the U. S. Department of Agriculture on 'Bird Day in the Schools,' 'A Story for Little Women,' and a poster giving extracts from the laws protecting wild birds.

As a means of bringing its work to the attention of the teachers of public schools, the society secured from Mr. Charles R. Skinner, State Superintendent of Public Instruction, a letter addressed to the principals and teachers of public schools, which shows such appreciation of the importance of the subject of bird-study and bird-protection, that it is given here in full:

"I beg leave to call your attention to the excellent work of the Audubon Society, and to earnestly request that you exercise your influence to awaken in the minds of your pupils a greater love and care for 'our little brothers of the air.' The necessity for protecting our native birds is apparent to all who have given any thought to the subject, and I know of no better way than to arouse a healthy and humane sentiment among the children."

Copies of this letter, together with sets of the Society's circulars, have been distributed to over 1000 public schools, and it is hoped that an interest may be awakened which will result in the establishment of a Bird-Day in the schools."

That the good work is spreading broadly is evidenced by the following list of Audubon Societies from which we have received circulars or other announcements of their formation, all but the first two organized within the present year.

Massachusetts Audubon Society. Secretary, Miss Harriet E. Richards, Boston Society of Natural History, Berkeley St., Boston, Mass.

Pennsylvania Audubon Society. Secretary, Mrs. Edward Robins, 114 South 21st St., Philadelphia, Pa.

Audubon Society of the State of New York. Secretary, Miss Emma H. Lockwood, 243 West 75th St., New York City.

New Hampshire Audubon Society. Secretary, Mrs. Franck W. Batchelder, Myrtle Hill, Manchester, N. H.

Illinois Audubon Society. Secretary, Miss Emily Rumsey, 313 Huron St., Chicago, Ill.

Maine Audubon Society. Secretary, Miss Edith J. Boardman, Brunswick, Me.

Audubon Society of the District of Columbia. Secretary, Mrs. John Dewhurst Patten, 3033 P St., Washington, D. C.

Wisconsin Audubon Society. Secretary Miss Madge Anderson, 134 Twentieth St., Milwaukee, Wis.

New Jersey Audubon Society. Secretary, Miss Mary A. Mellick, Plainfield, N. J.

Audubon Societies are also organizing in Colorado, Rhode Island, and other States.

THE NEW YORK ZOÖLOGICAL SOCIETY was incorporated, by special act of the Legislature, April 26, 1895, "to establish and maintain a Zoölogical Garden in the City of New York, to encourage the study of Zoölogy, and to furnish instruction and recreation for the people"; and the Commissioners of the Sinking Fund were authorized by the same act to set apart lands for the uses of the Society. On March 24, 1897, the said Commissioners made an allotment of a tract of 261 acres in South Bronx Park to the Society, for the purposes of a Zoölogical Garden. The Society is to provide the original equipment of buildings and animals, and has begun to raise by subscription a fund of \$250,000 for this purpose. The encouragement already received indicates that the means needed will be promptly raised. A vast amount of time and labor has been expended on the plans of the grounds and buildings, and they will be submitted to experts — landscape gardeners, field naturalists and zoölogical garden experts — before final presentation to the Park Commissioners for adoption. It is expected that actual work on the grounds will soon begin, and in due time we may hope to see in Bronx Park one of the largest and best equipped zoölogical gardens in the world. The Society is fortunate in having secured Mr. William T. Hornaday as Director of the Gardens. The present office of the Society is 69 Wall St., New York City.





A. Hoen & Co. Lithocasts, Baltimore.

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